1/29

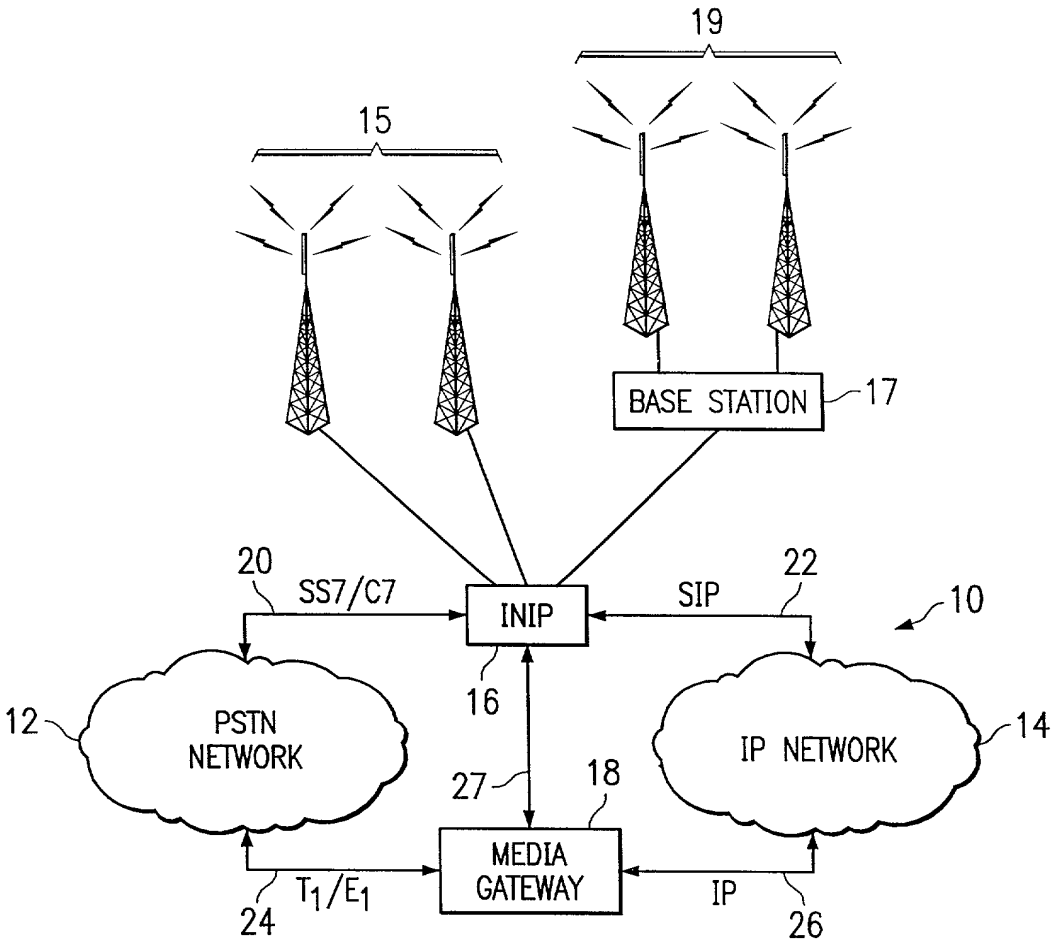


FIG. 1

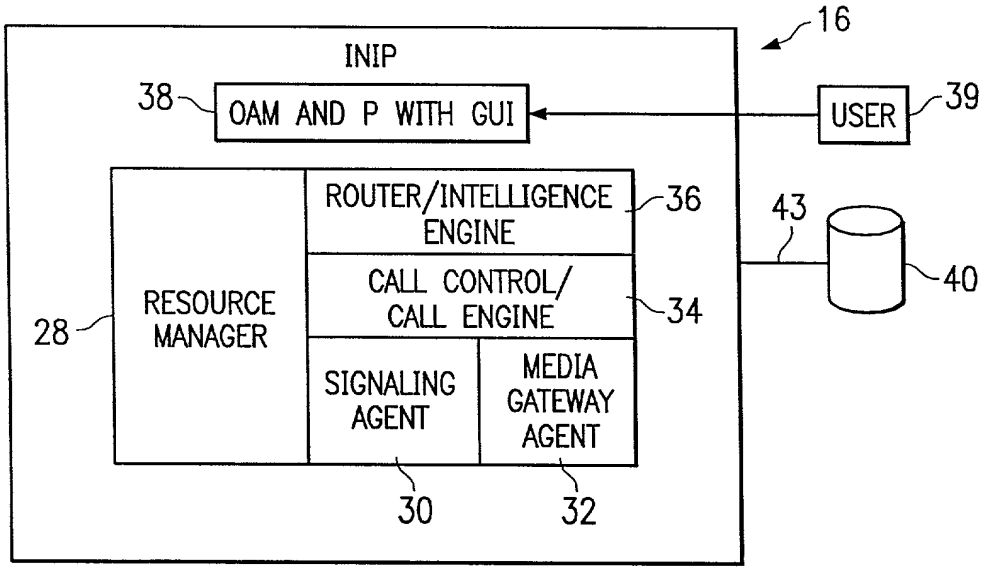
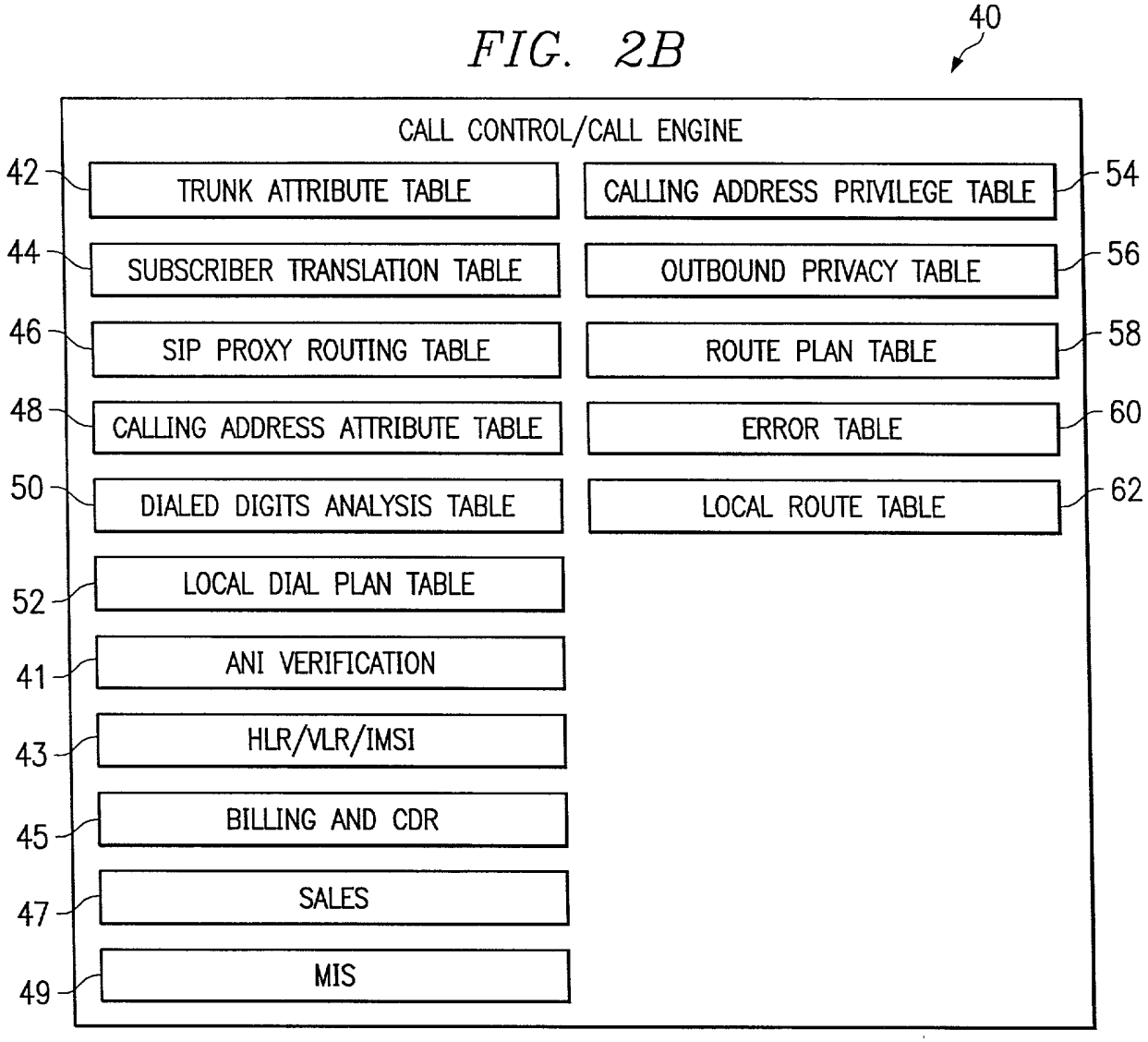


FIG. 2A

FIG. 2B



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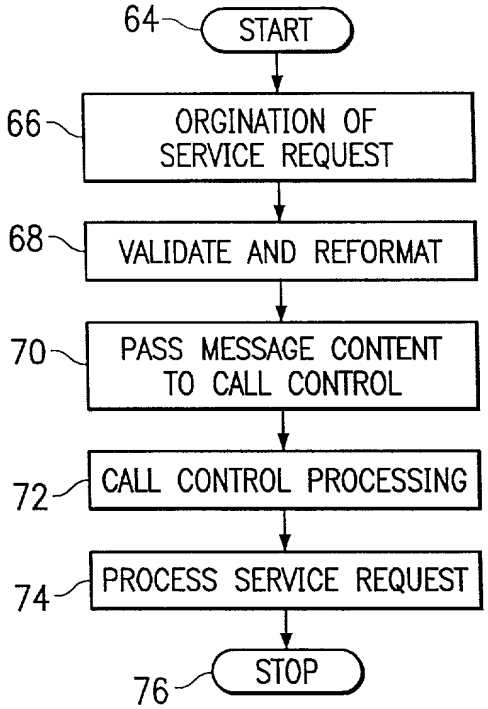

64
START
66
ORGINATION OF SERVICE REQUEST
68
VALIDATE AND REFORMAT
70
PASS MESSAGE CONTENT TO CALL CONTROL
72
CALL CONTROL PROCESSING
74
PROCESS SERVICE REQUEST
76
STOP

FIG. 3

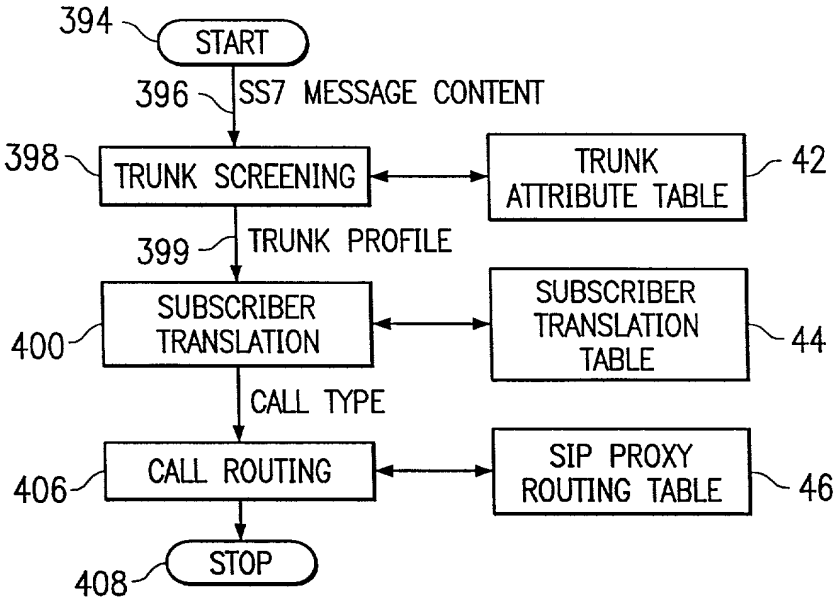
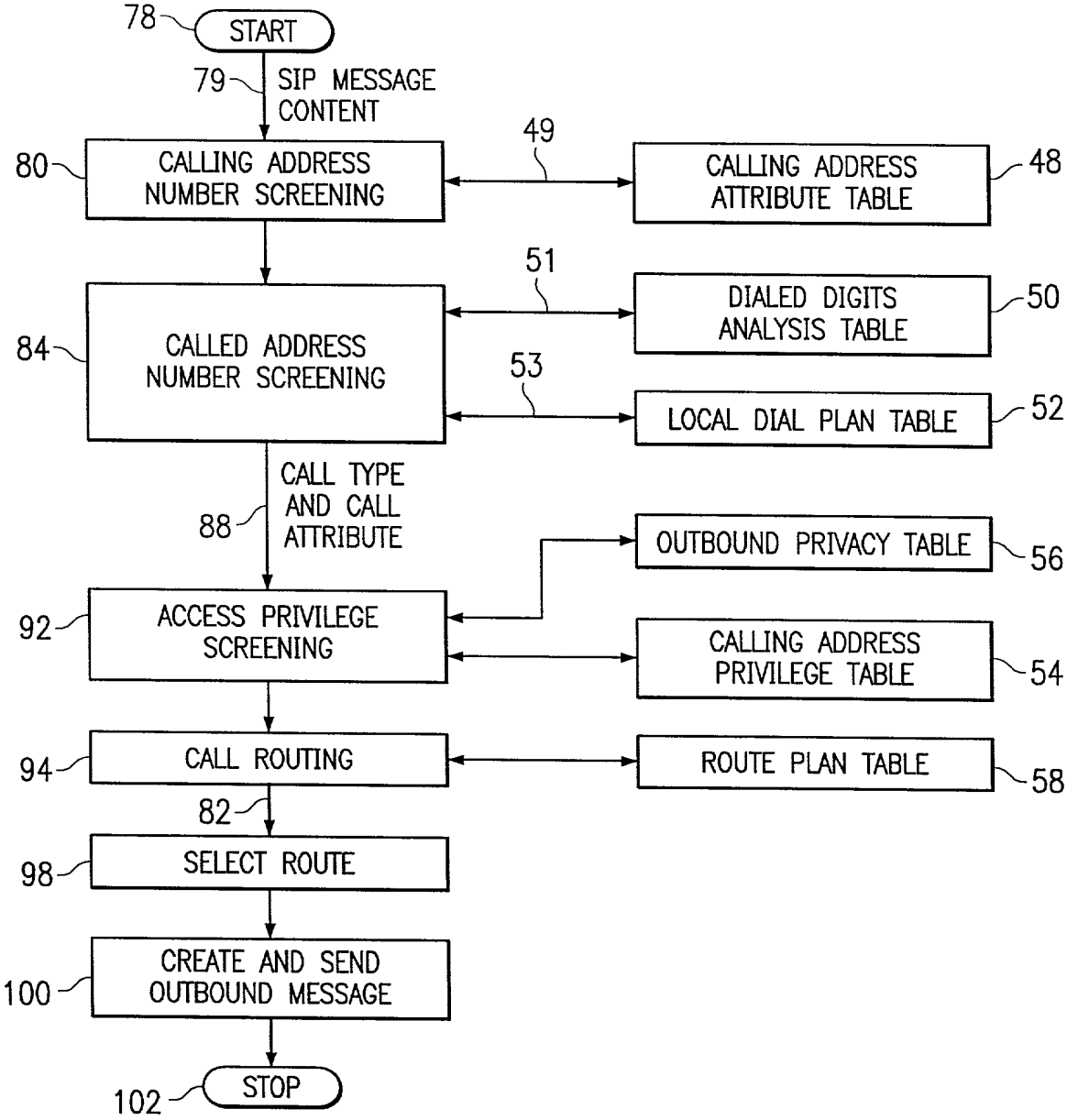

394
START
396
SS7 MESSAGE CONTENT
398
TRUNK SCREENING
TRUNK ATTRIBUTE TABLE
42
399
TRUNK PROFILE
400
SUBSCRIBER TRANSLATION
SUBSCRIBER TRANSLATION TABLE
44
CALL TYPE
406
CALL ROUTING
SIP PROXY ROUTING TABLE
46
408
STOP

FIG. 4B

FIG. 4A


78
START
79
SIP MESSAGE CONTENT
80
CALLING ADDRESS NUMBER SCREENING
49
CALLING ADDRESS ATTRIBUTE TABLE
48
51
DIALED DIGITS ANALYSIS TABLE
50
84
CALLED ADDRESS NUMBER SCREENING
53
LOCAL DIAL PLAN TABLE
52
88
CALL TYPE AND CALL ATTRIBUTE
OUTBOUND PRIVACY TABLE
56
92
ACCESS PRIVILEGE SCREENING
CALLING ADDRESS PRIVILEGE TABLE
54
94
CALL ROUTING
ROUTE PLAN TABLE
58
82
98
SELECT ROUTE
100
CREATE AND SEND OUTBOUND MESSAGE
102
STOP

TOOT20" 20ST2860

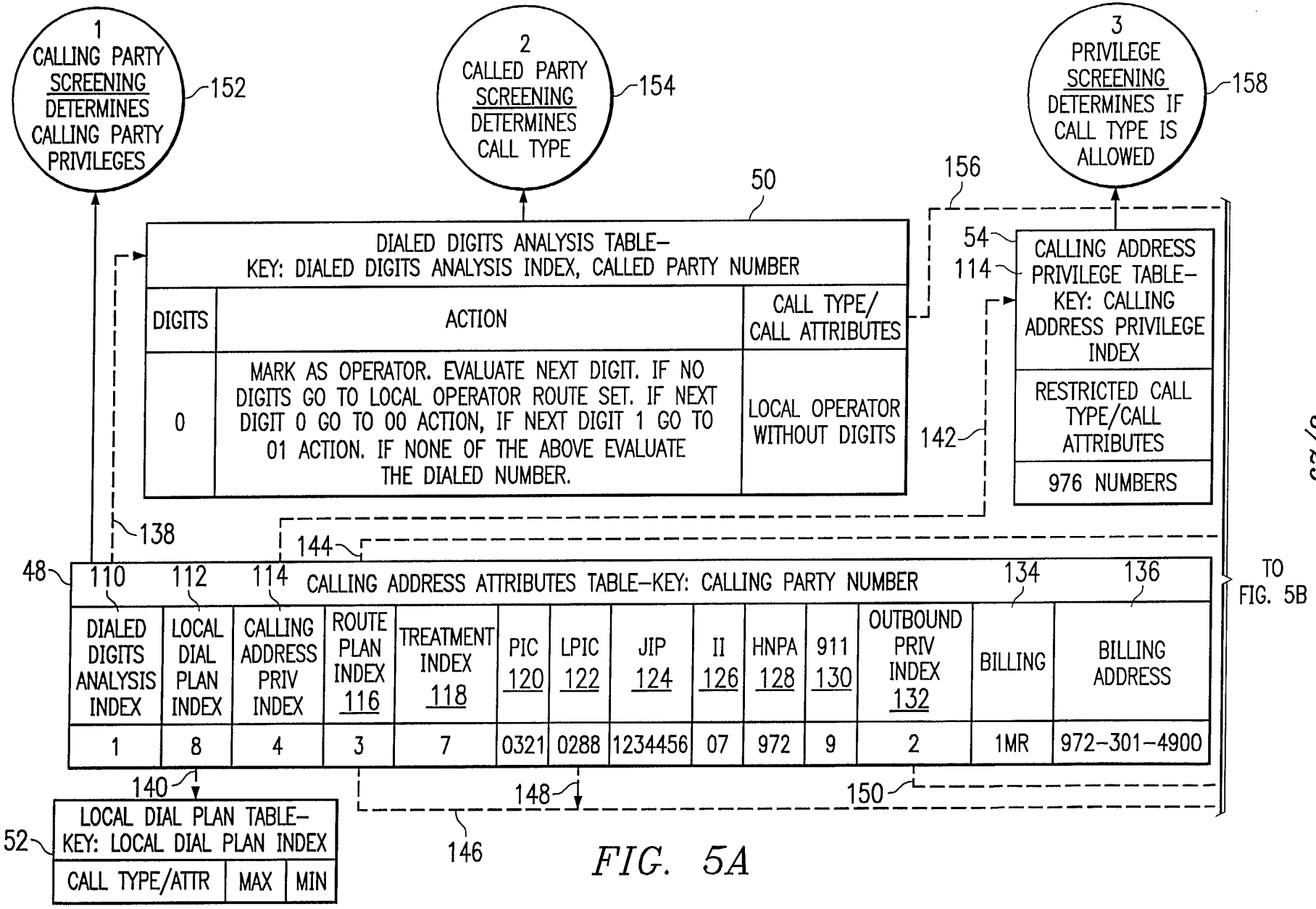


FIG. 5A

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TOOT20"ZOSTZ360

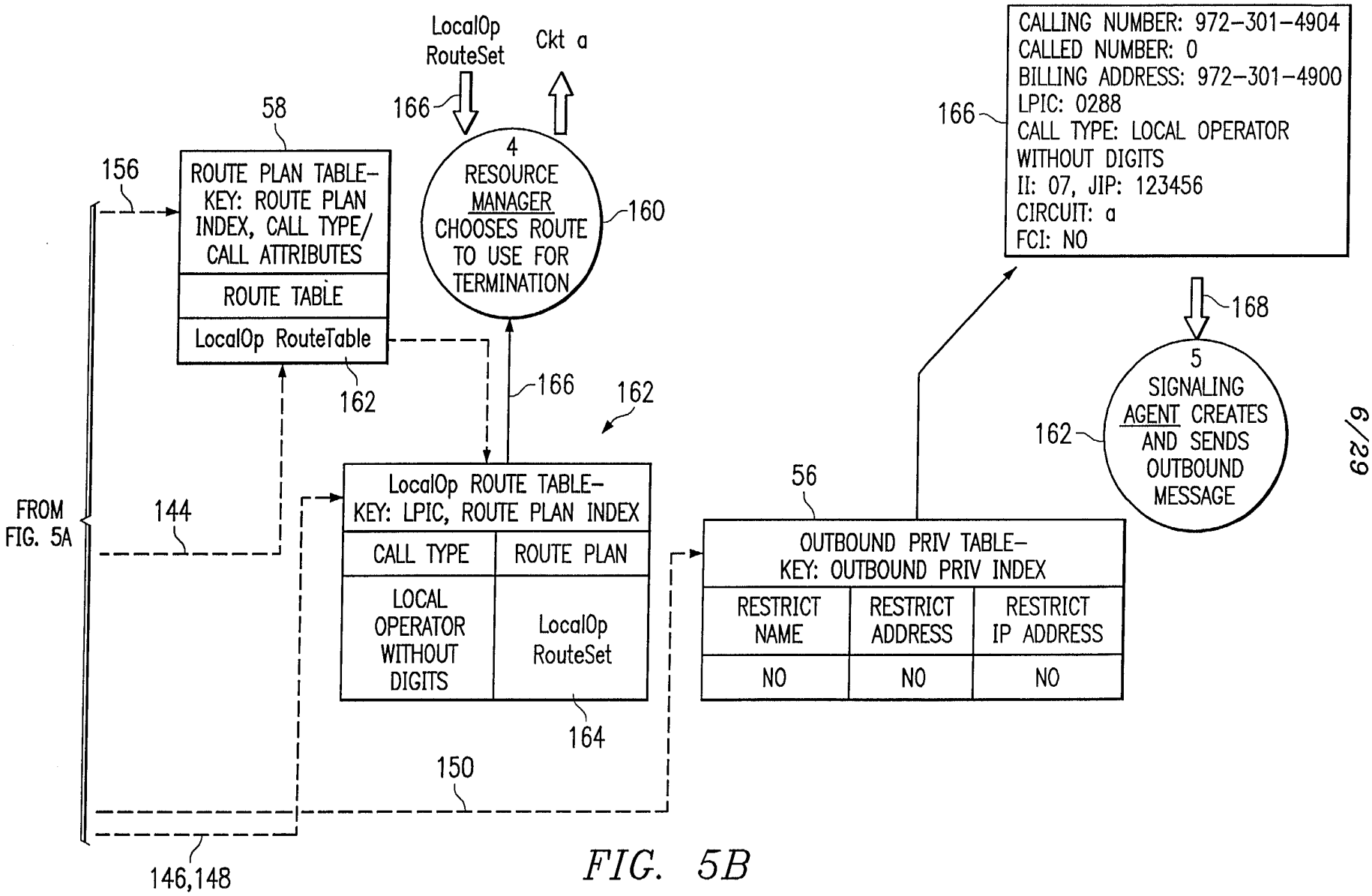

FIG. 5B

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09825907.070102

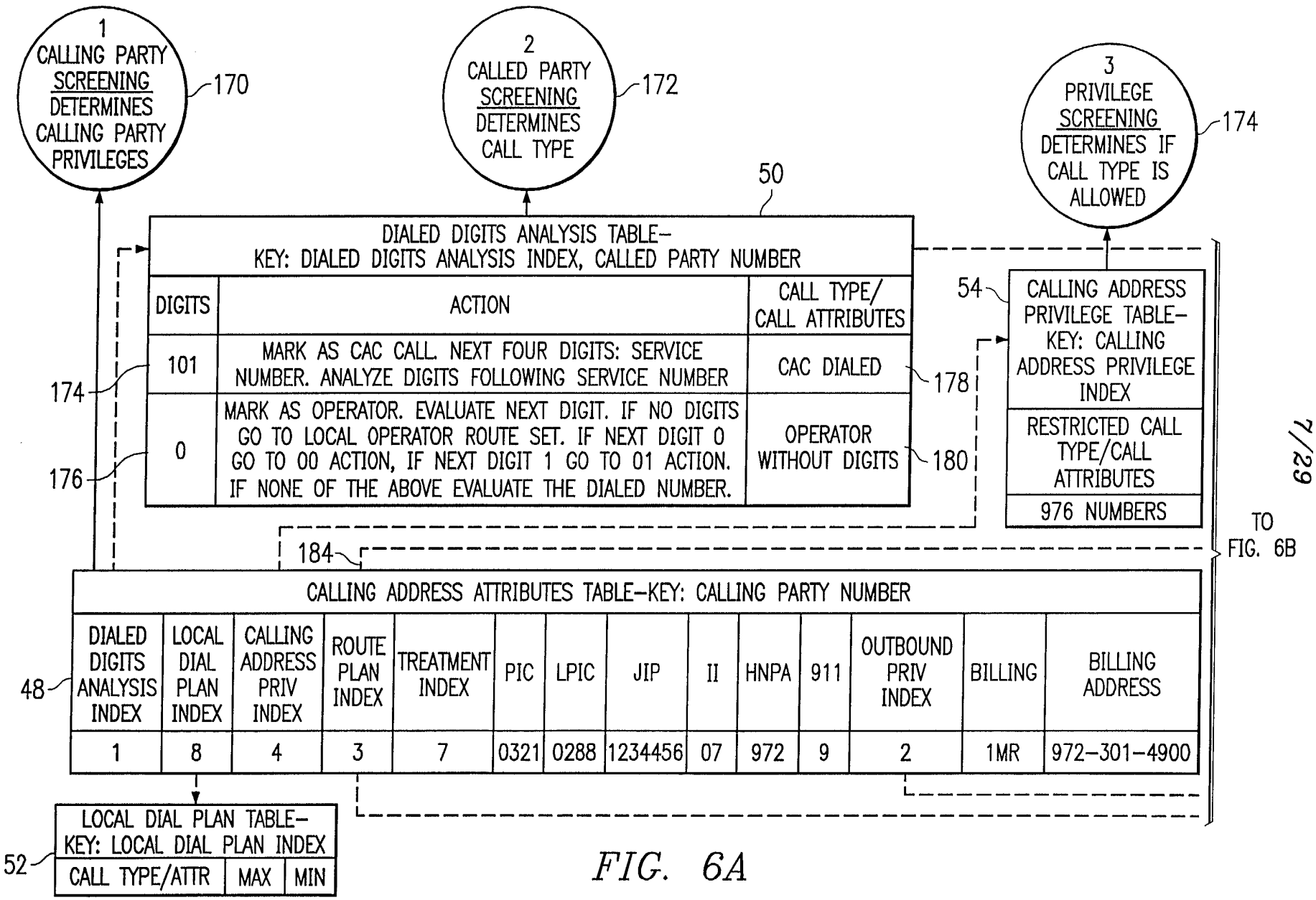

FIG. 6A

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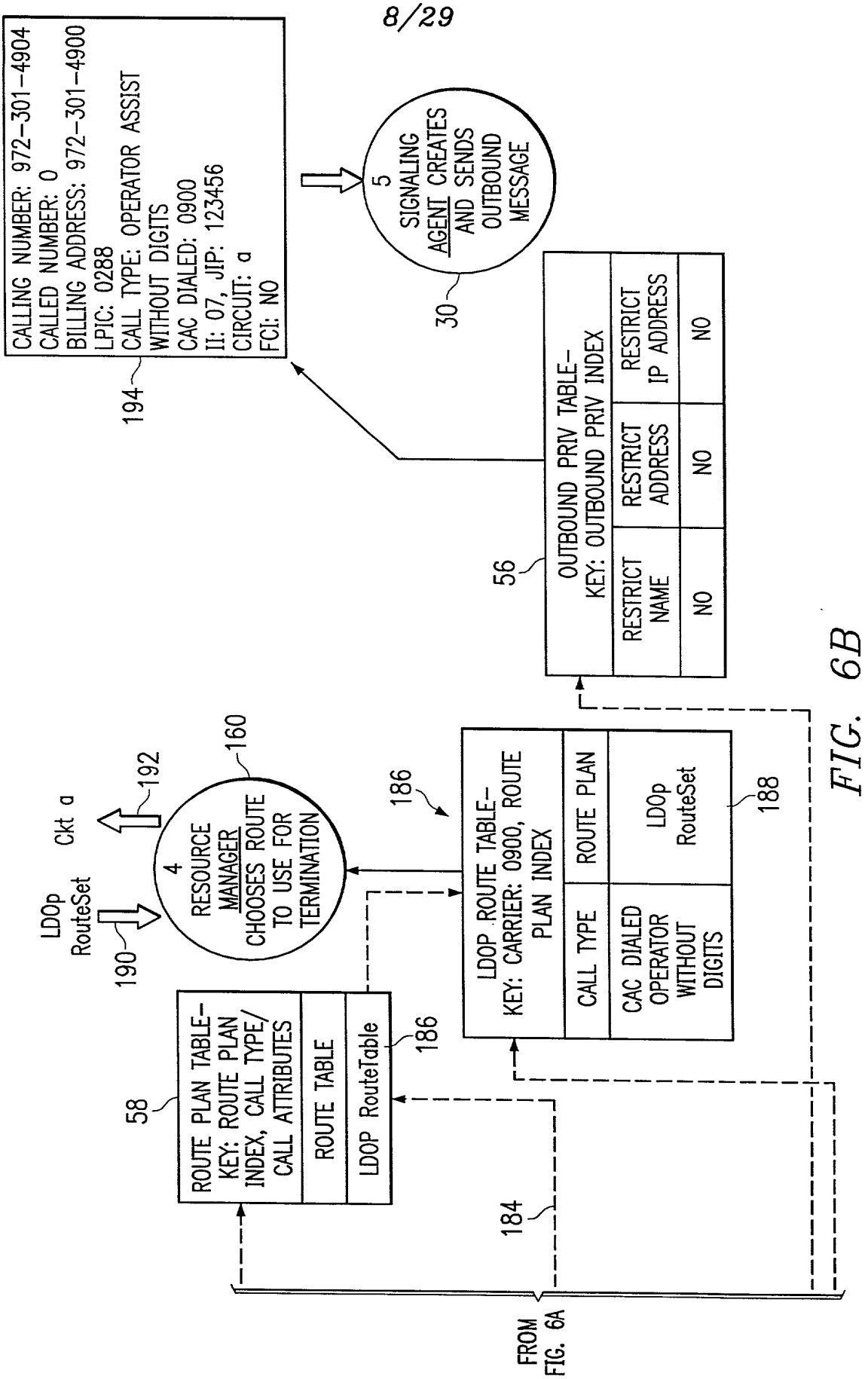
CALLING NUMBER: 972-301-4904
CALLED NUMBER: 0
BILLING ADDRESS: 972-301-4900
LPIC: 0288
CALL TYPE: OPERATOR ASSIST WITHOUT DIGITS
CAC DIALED: 0900
II: 07, JIP: 123456
CIRCUIT: a
FCI: N0
194
5 SIGNALING AGENT CREATES AND SENDS OUTBOUND MESSAGE
30
OUTBOUND PRIV TABLE- KEY: OUTBOUND PRIV INDEX
RESTRICT NAME
RESTRICT ADDRESS
RESTRICT IP ADDRESS
NO
NO
NO
56
LDOp RouteSet
190
Ckt a
192
4 RESOURCE MANAGER CHOOSES ROUTE TO USE FOR TERMINATION
160
186
LDOP ROUTE TABLE- KEY: CARRIER: 0900, ROUTE PLAN INDEX
CALL TYPE
ROUTE PLAN
CAC DIALED OPERATOR WITHOUT DIGITS
LDOp RouteSet
188
ROUTE PLAN TABLE- KEY: ROUTE PLAN INDEX, CALL TYPE/ CALL ATTRIBUTES
ROUTE TABLE
LDOP RouteTable
186
58
184
FROM FIG. 6A

FIG. 6B

TOOT20"20ST3960

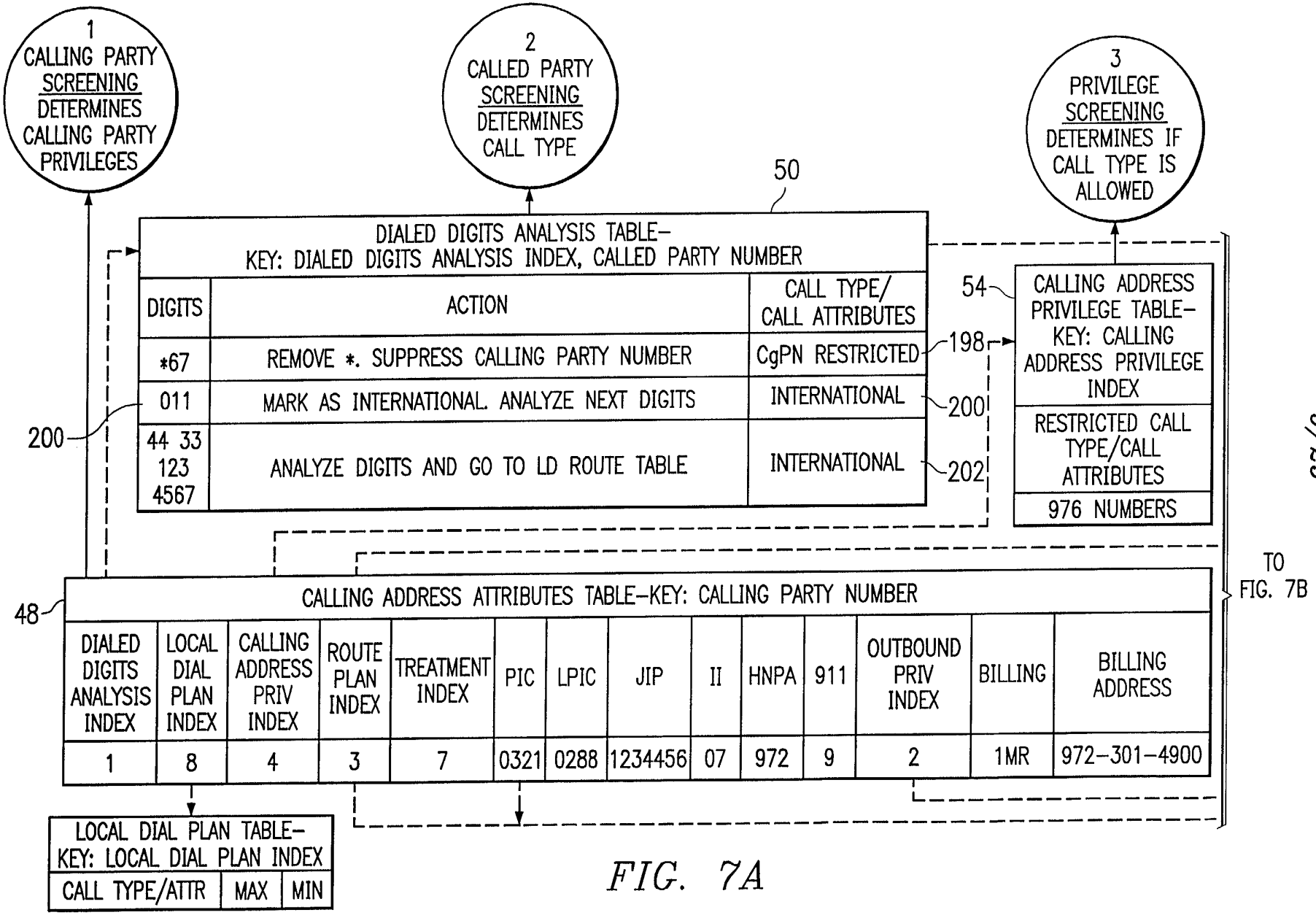

FIG. 7A

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TOOT20 "20ST2860

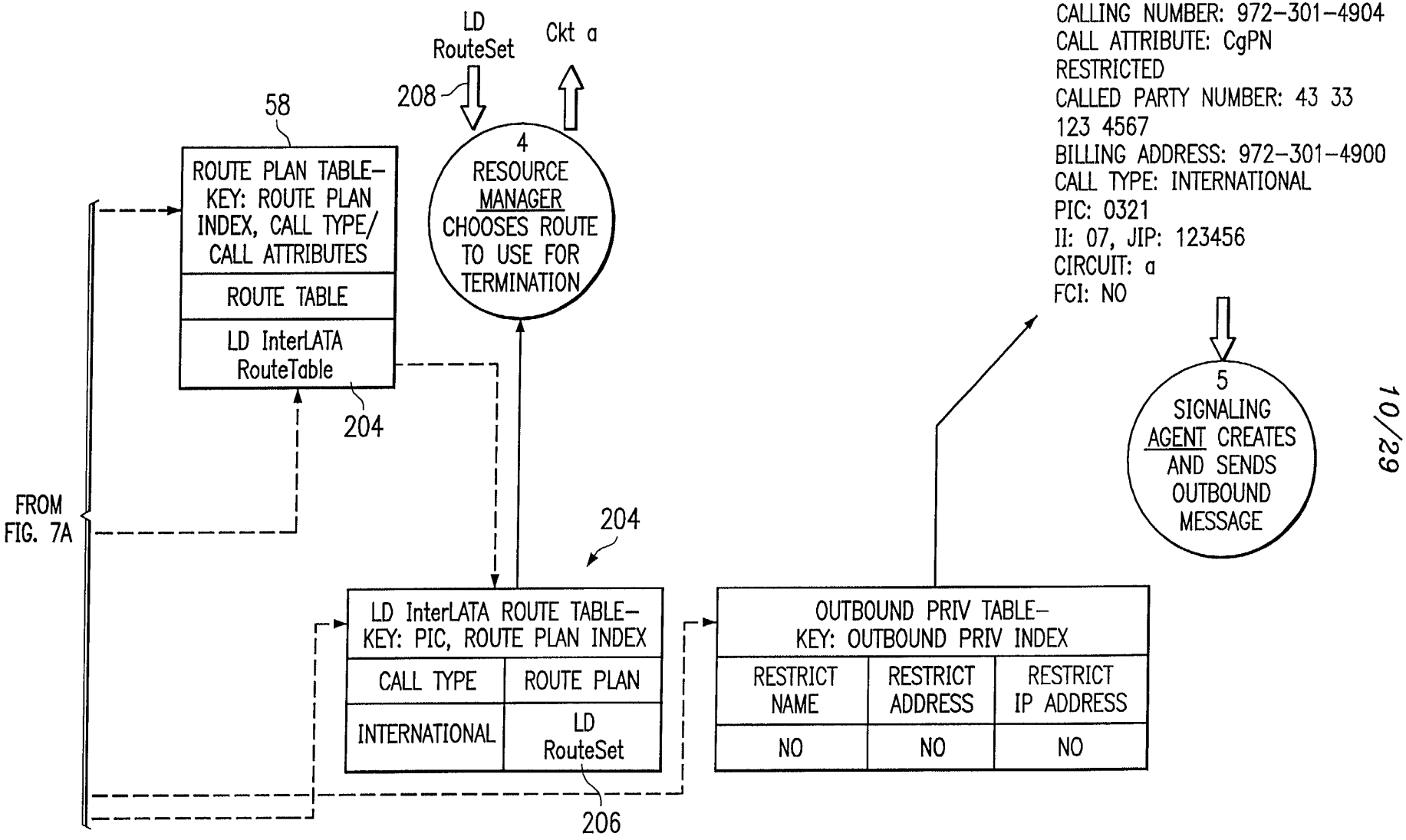

FIG. 7B

T00T20"20ST2860

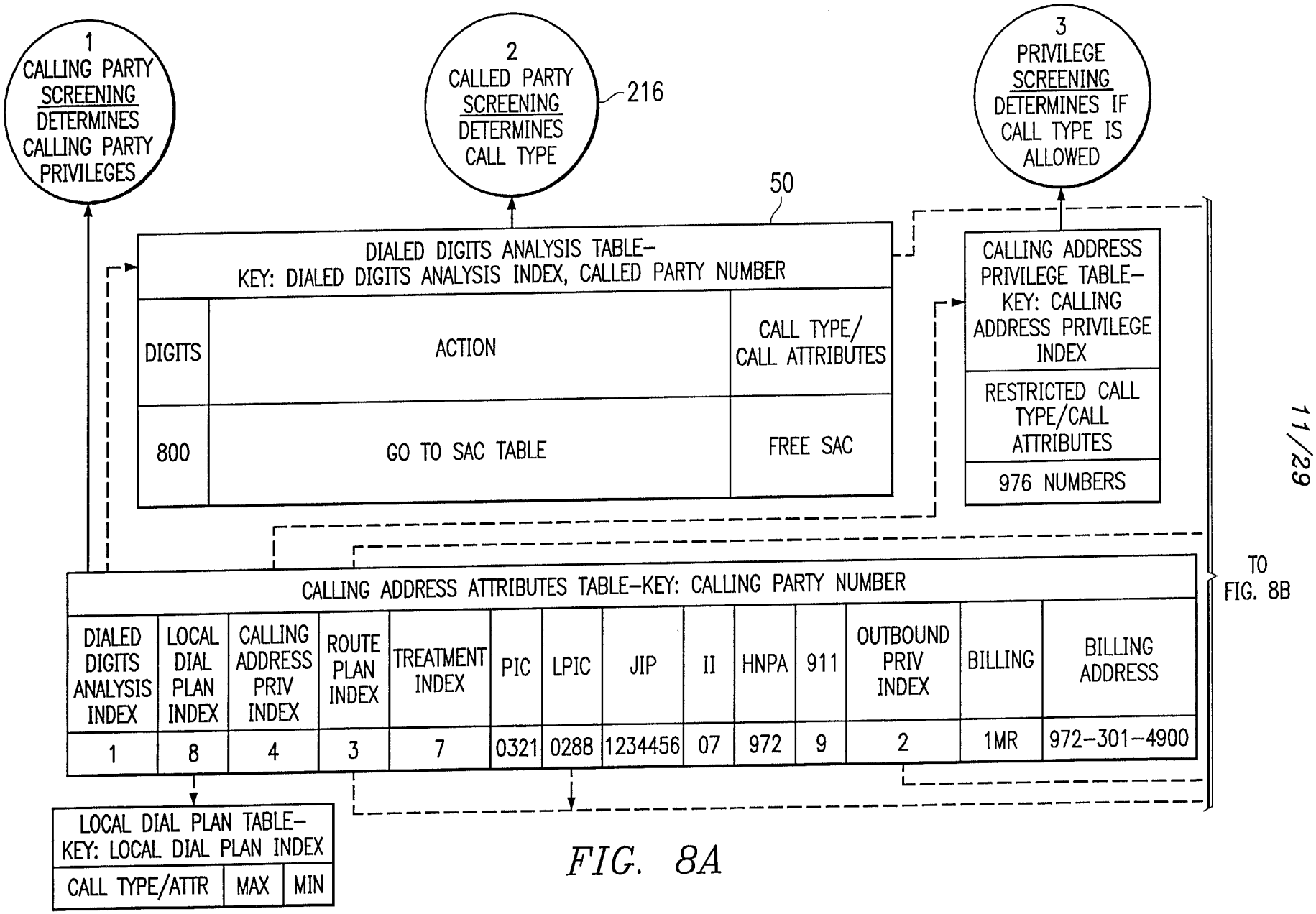

FIG. 8A

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TOOT20 "20ST2860

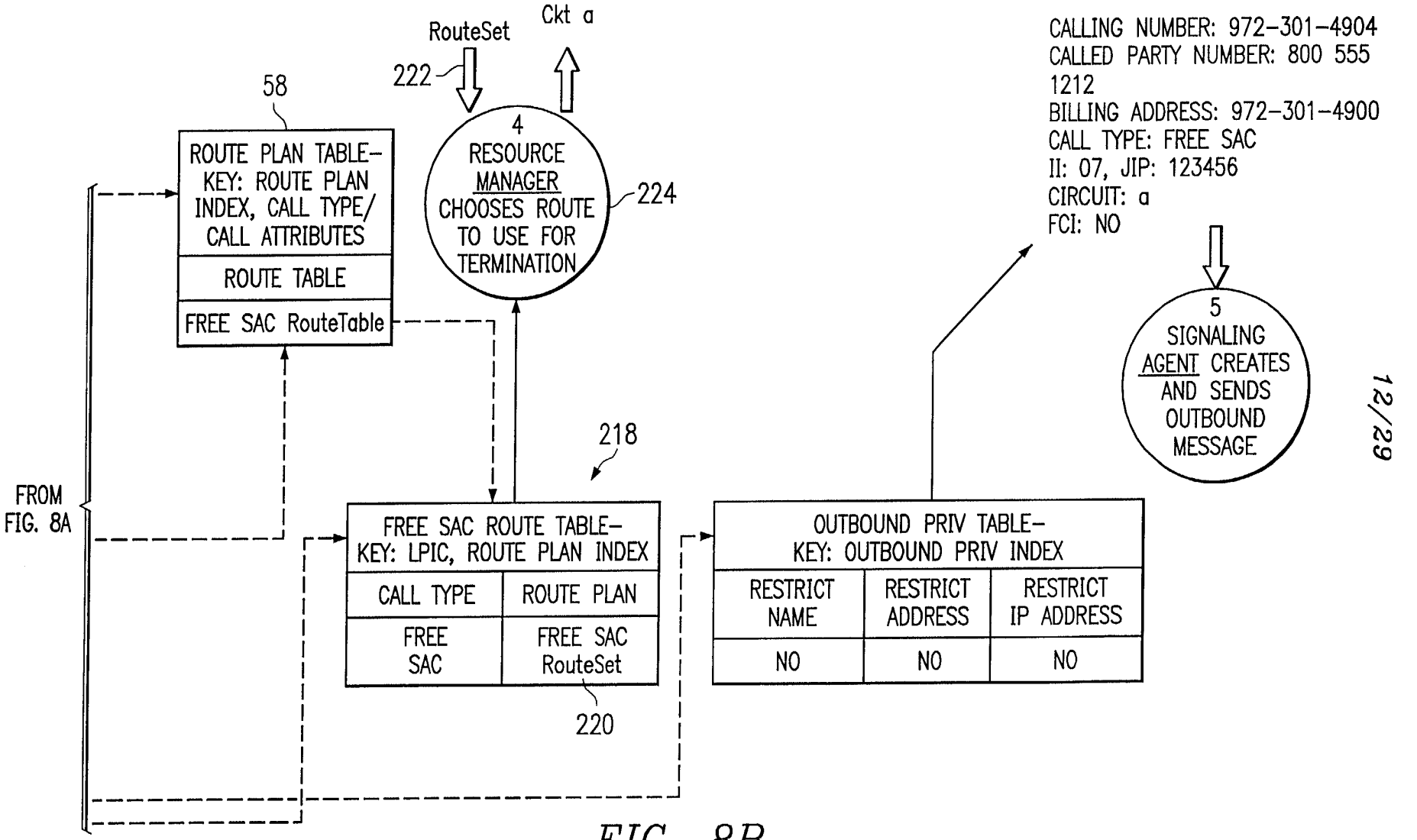

FIG. 8B

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TOOT20 "20ST2860

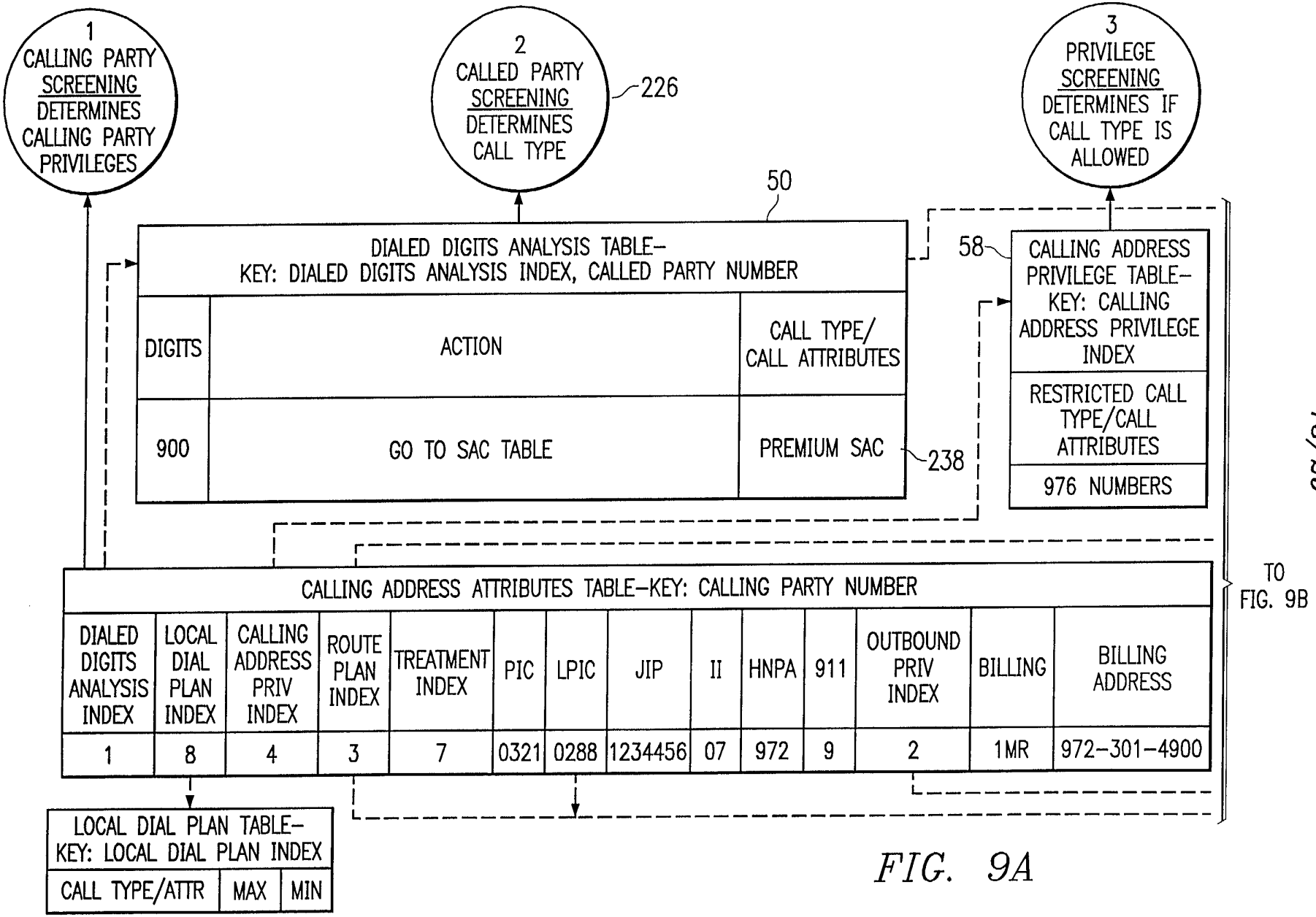

FIG. 9A

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T0070 "20ST2860

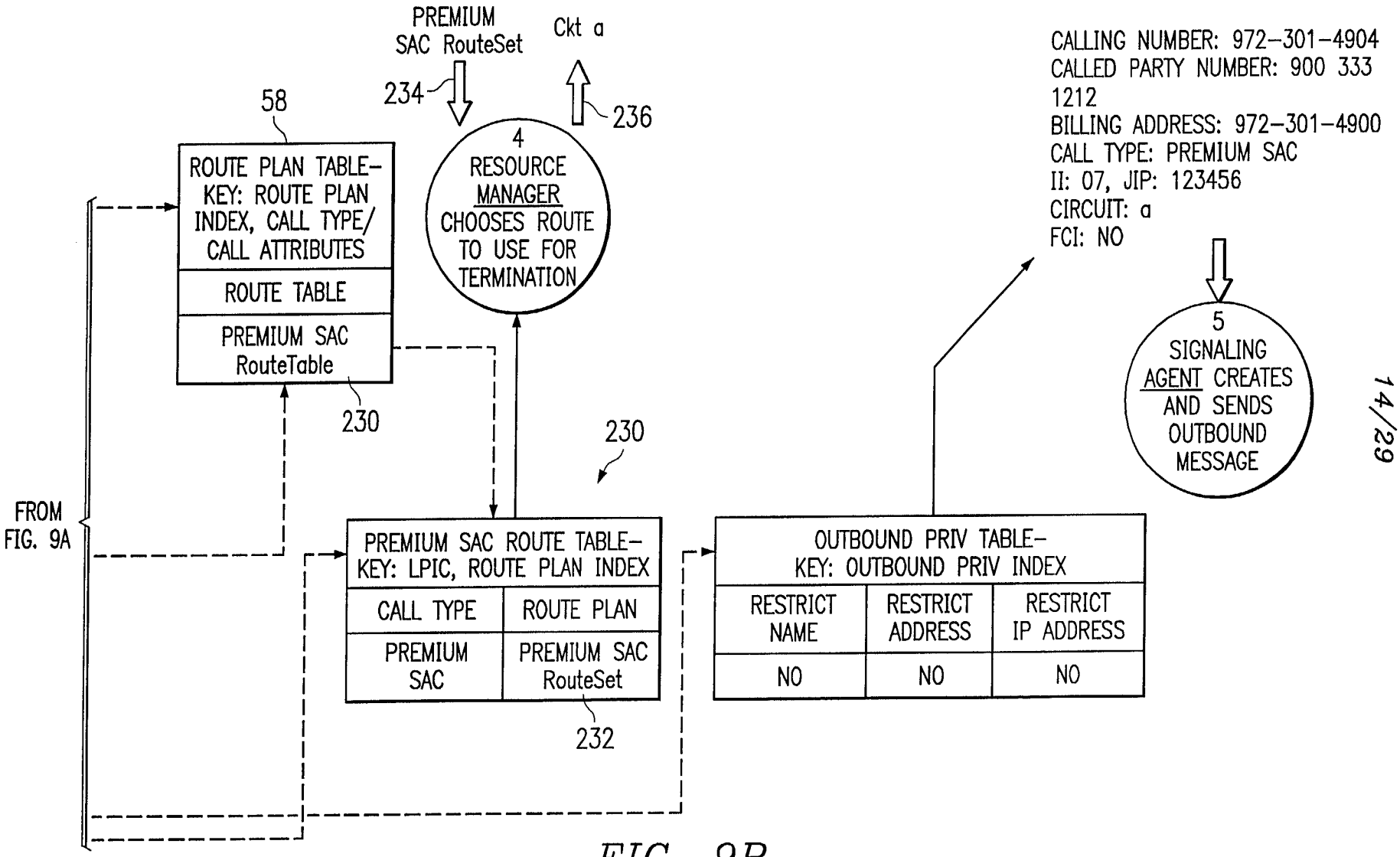

FIG. 9B

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T00T20" 20ST2860

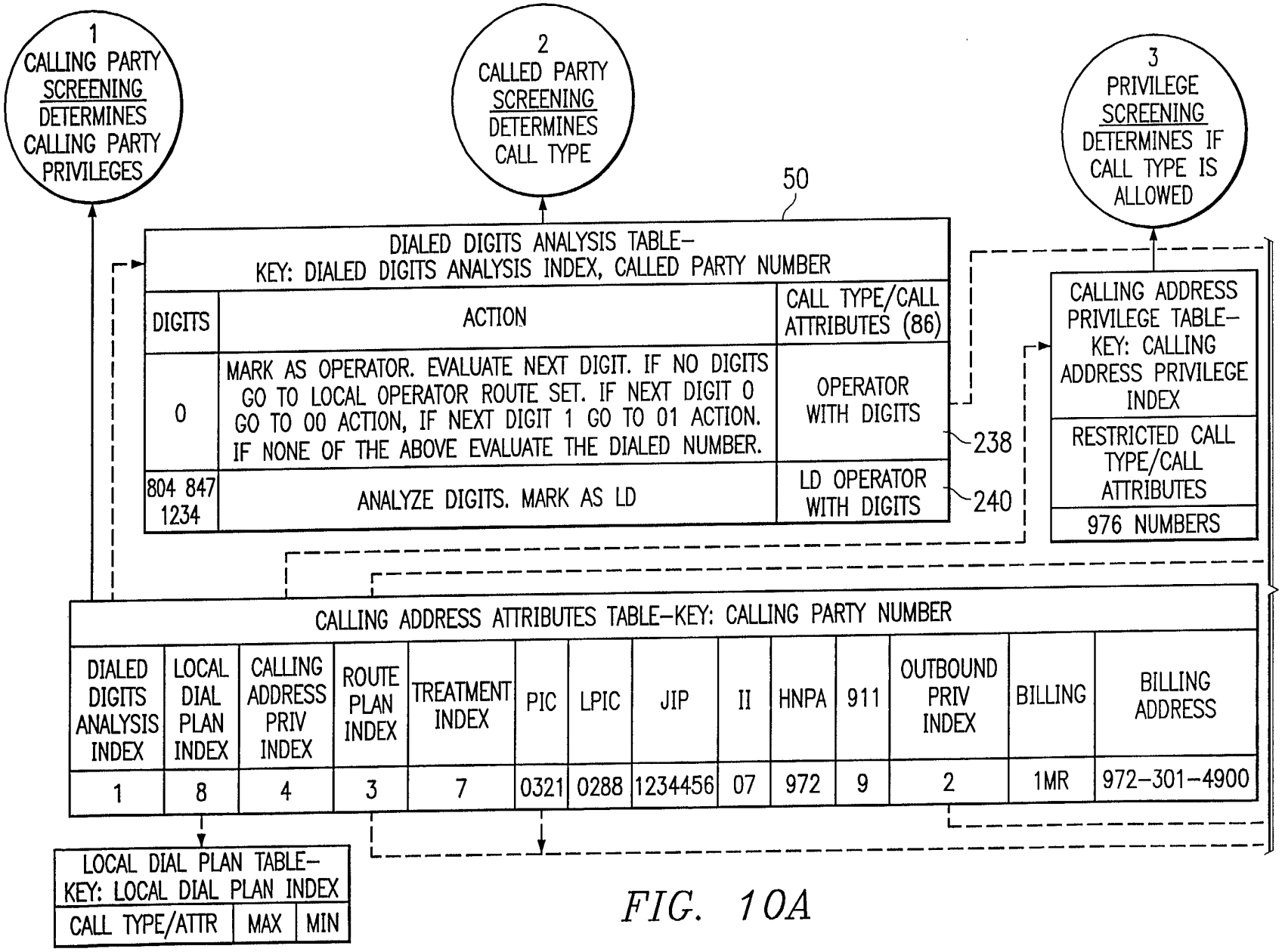

FIG. 10A

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TOOT20 "20ST2860

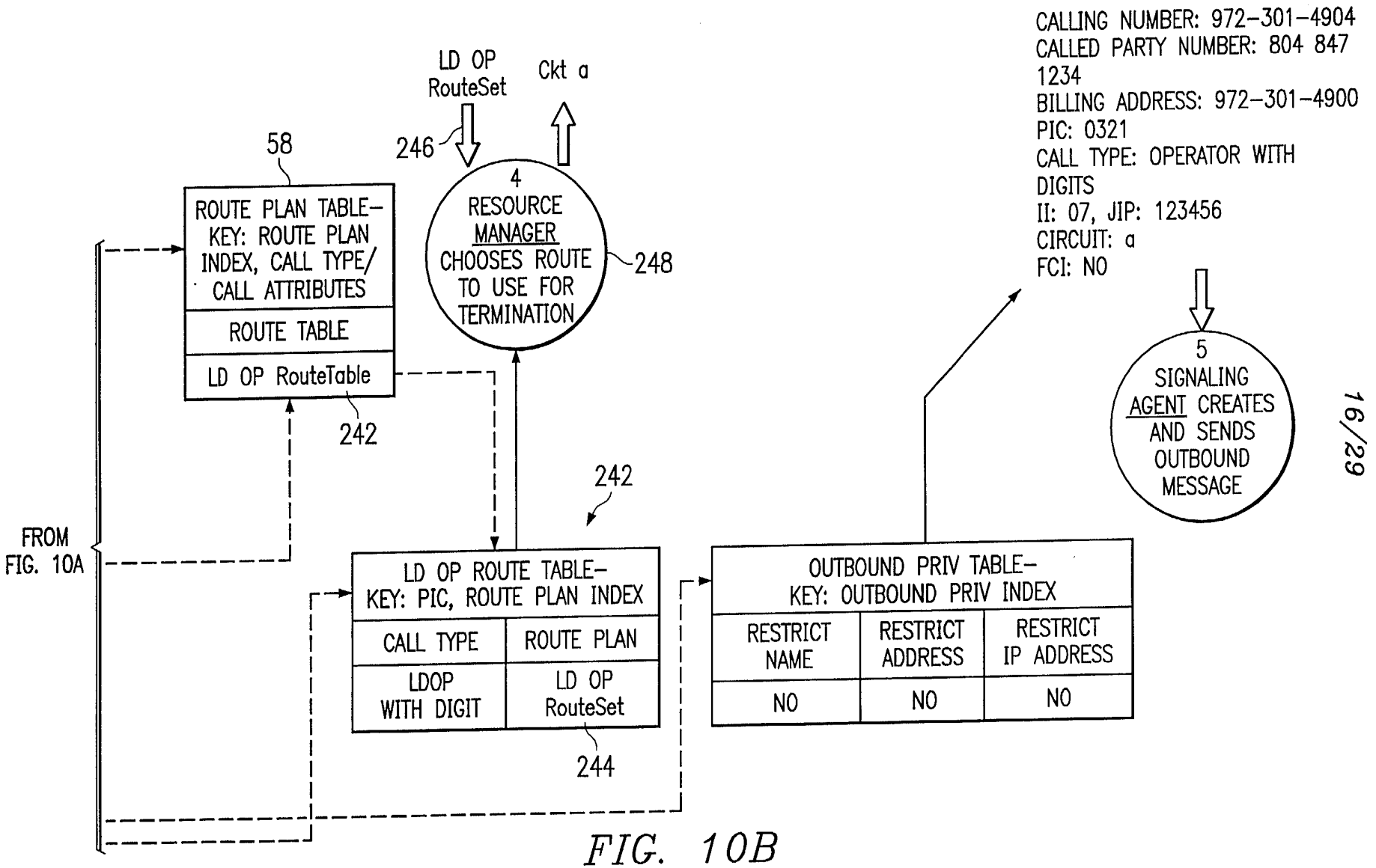

FIG. 10B

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T001Z0"Z05T2860

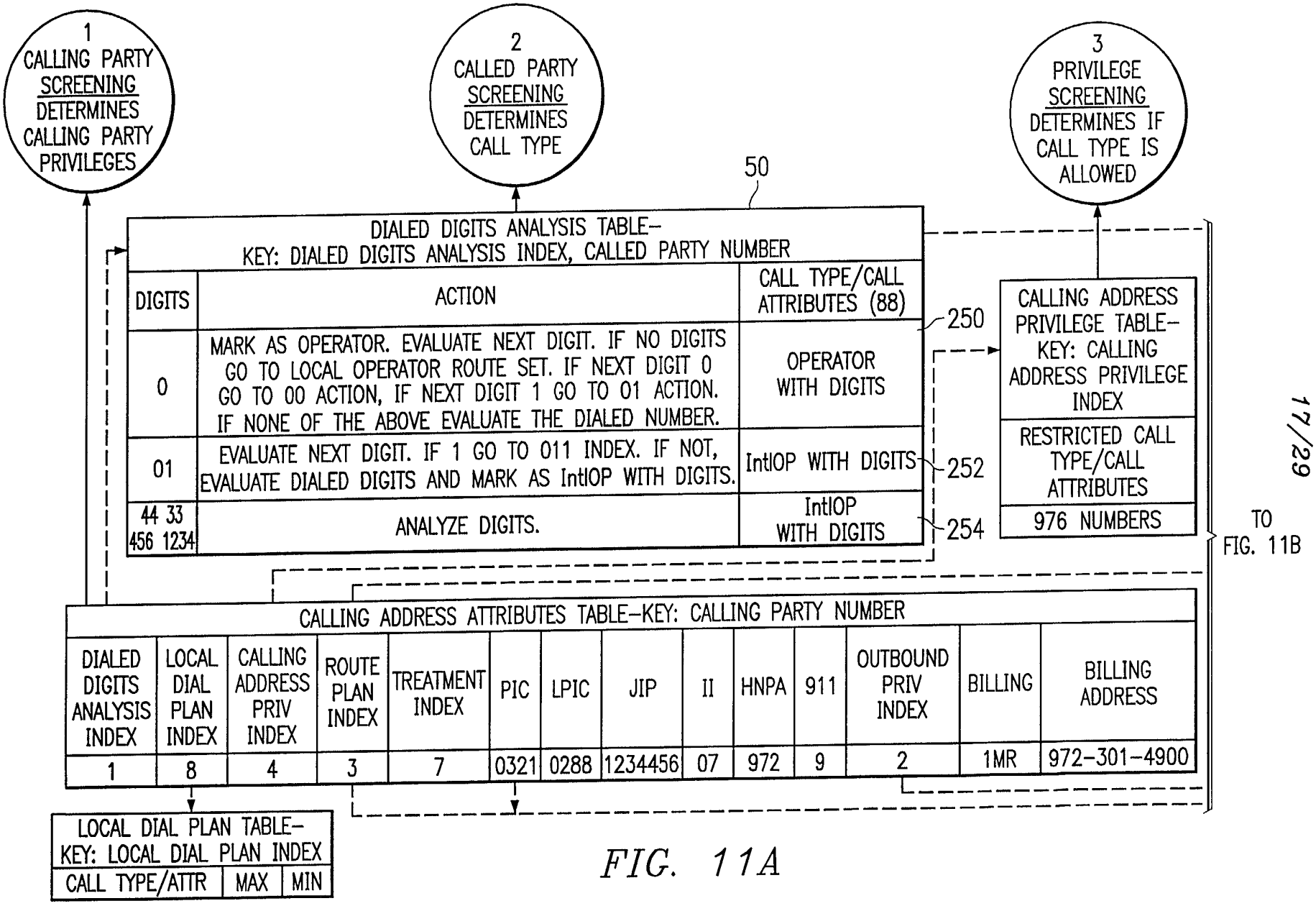

FIG. 11A

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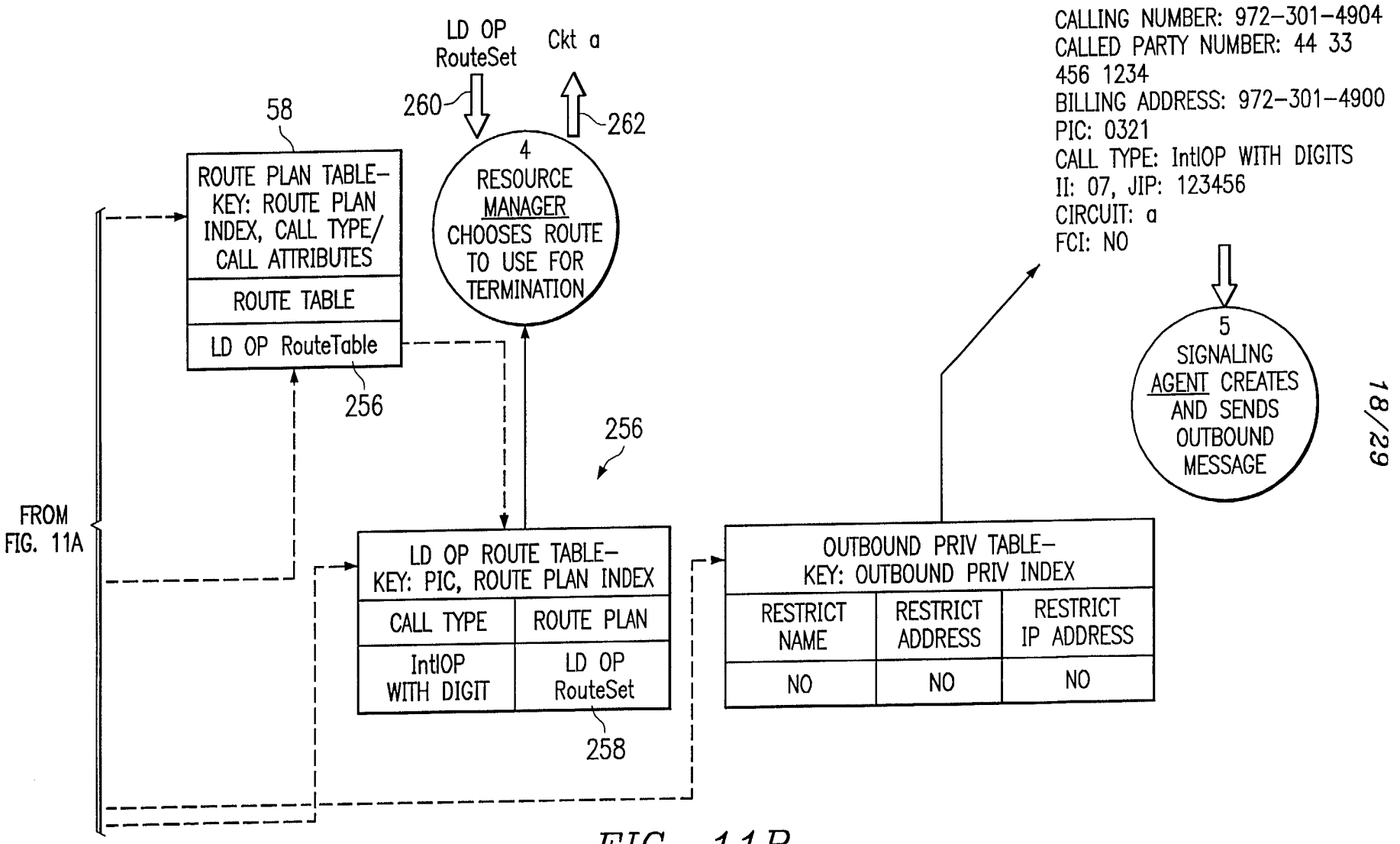
LD OP RouteSet
Ckt a
260
262
58
4
RESOURCE MANAGER CHOOSES ROUTE TO USE FOR TERMINATION
ROUTE PLAN TABLE– KEY: ROUTE PLAN INDEX, CALL TYPE/ CALL ATTRIBUTES
ROUTE TABLE
LD OP RouteTable
256
256
FROM FIG. 11A
LD OP ROUTE TABLE– KEY: PIC, ROUTE PLAN INDEX
CALL TYPE
ROUTE PLAN
IntlOP WITH DIGIT
LD OP RouteSet
258
OUTBOUND PRIV TABLE– KEY: OUTBOUND PRIV INDEX
RESTRICT NAME
RESTRICT ADDRESS
RESTRICT IP ADDRESS
NO
NO
NO
CALLING NUMBER: 972–301–4904
CALLED PARTY NUMBER: 44 33 456 1234
BILLING ADDRESS: 972–301–4900
PIC: 0321
CALL TYPE: IntlOP WITH DIGITS
II: 07, JIP: 123456
CIRCUIT: a
FCI: NO
5
SIGNALING AGENT CREATES AND SENDS OUTBOUND MESSAGE

FIG. 11B

T0072860 20912507

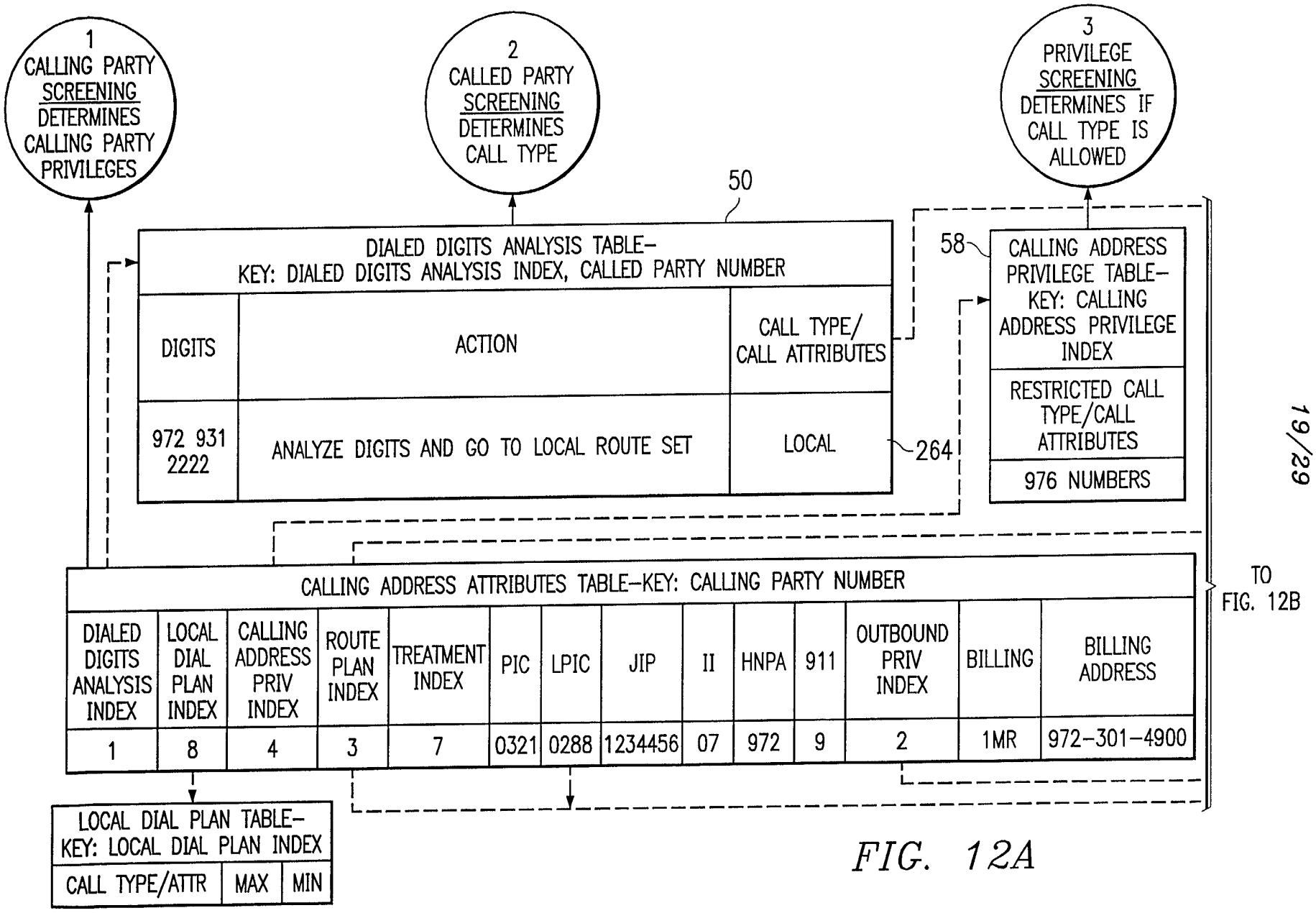

FIG. 12A

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TOOT20" ZOSTZ860

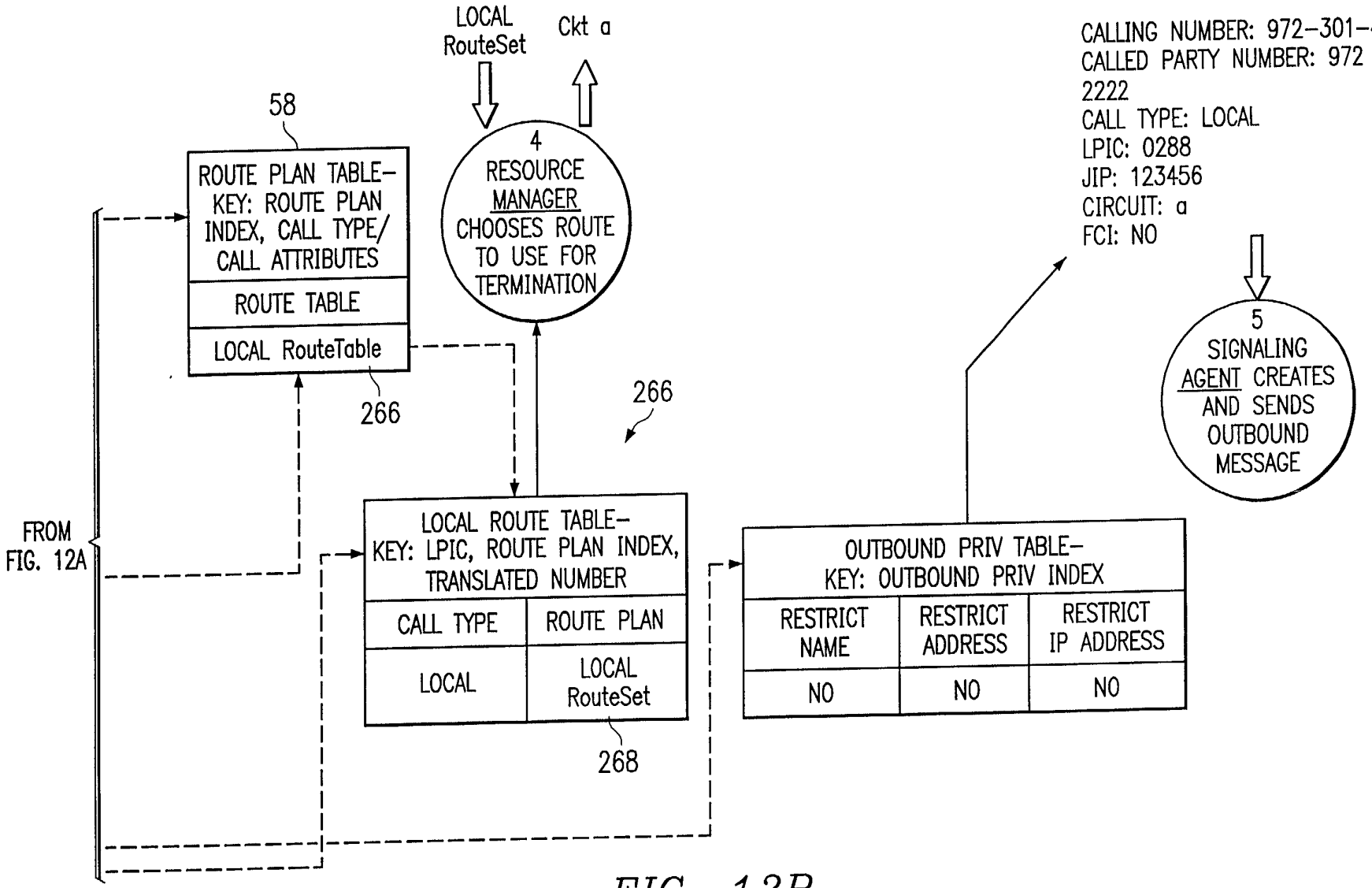

FIG. 12B

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By: Casimer M. Kaczmarczyk
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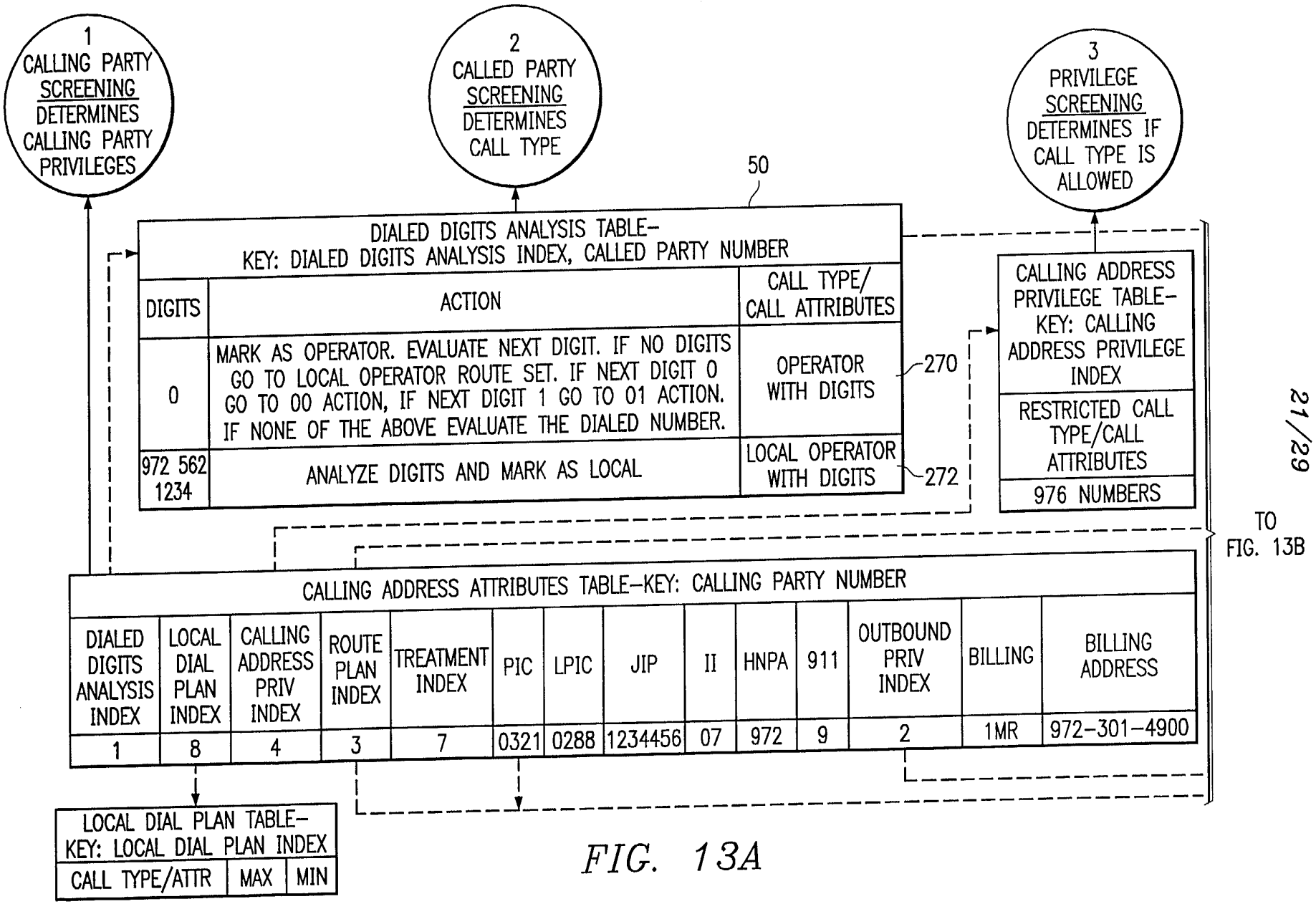

FIG. 13A

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TOOT20 "20ST2860

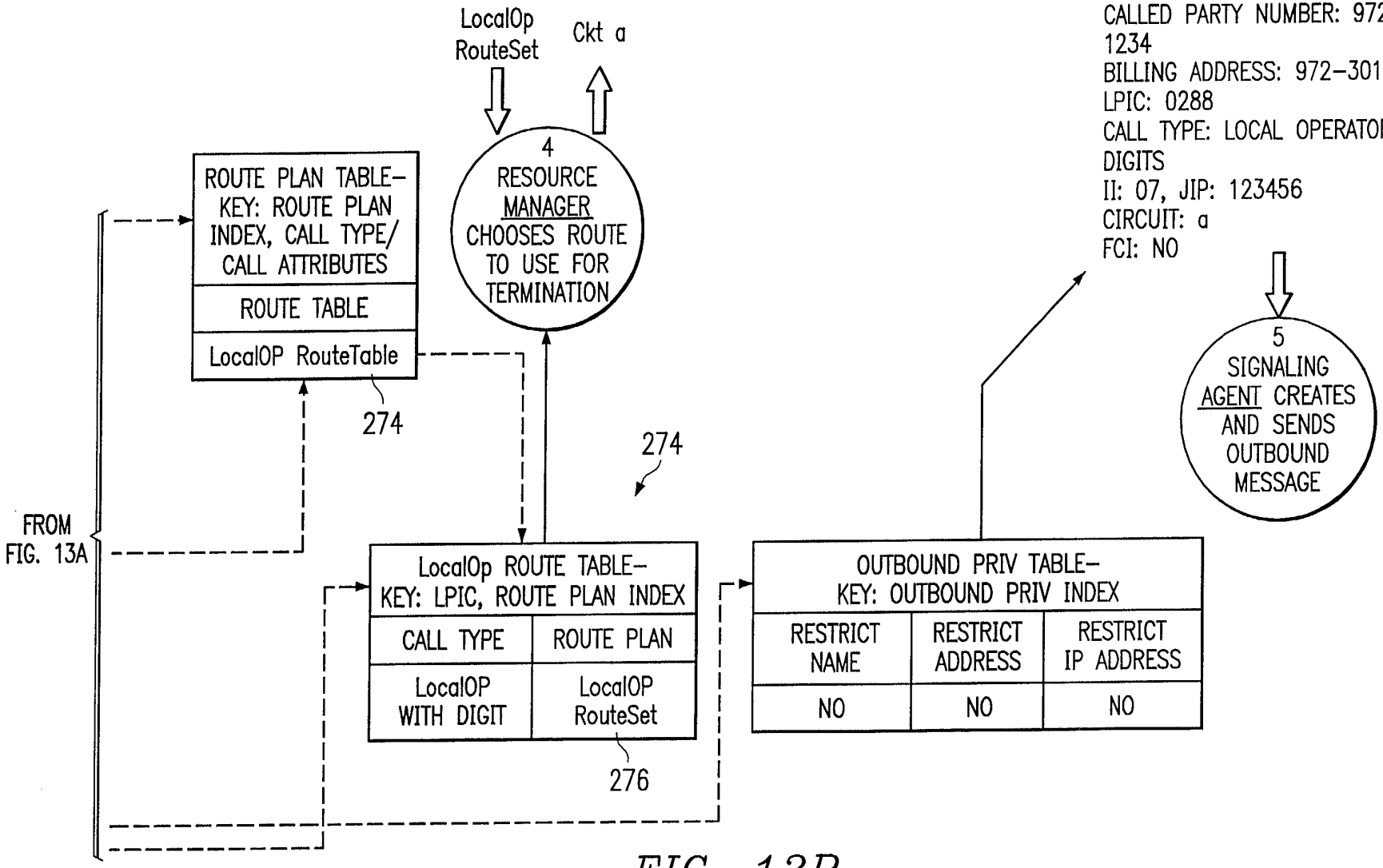

FIG. 13B

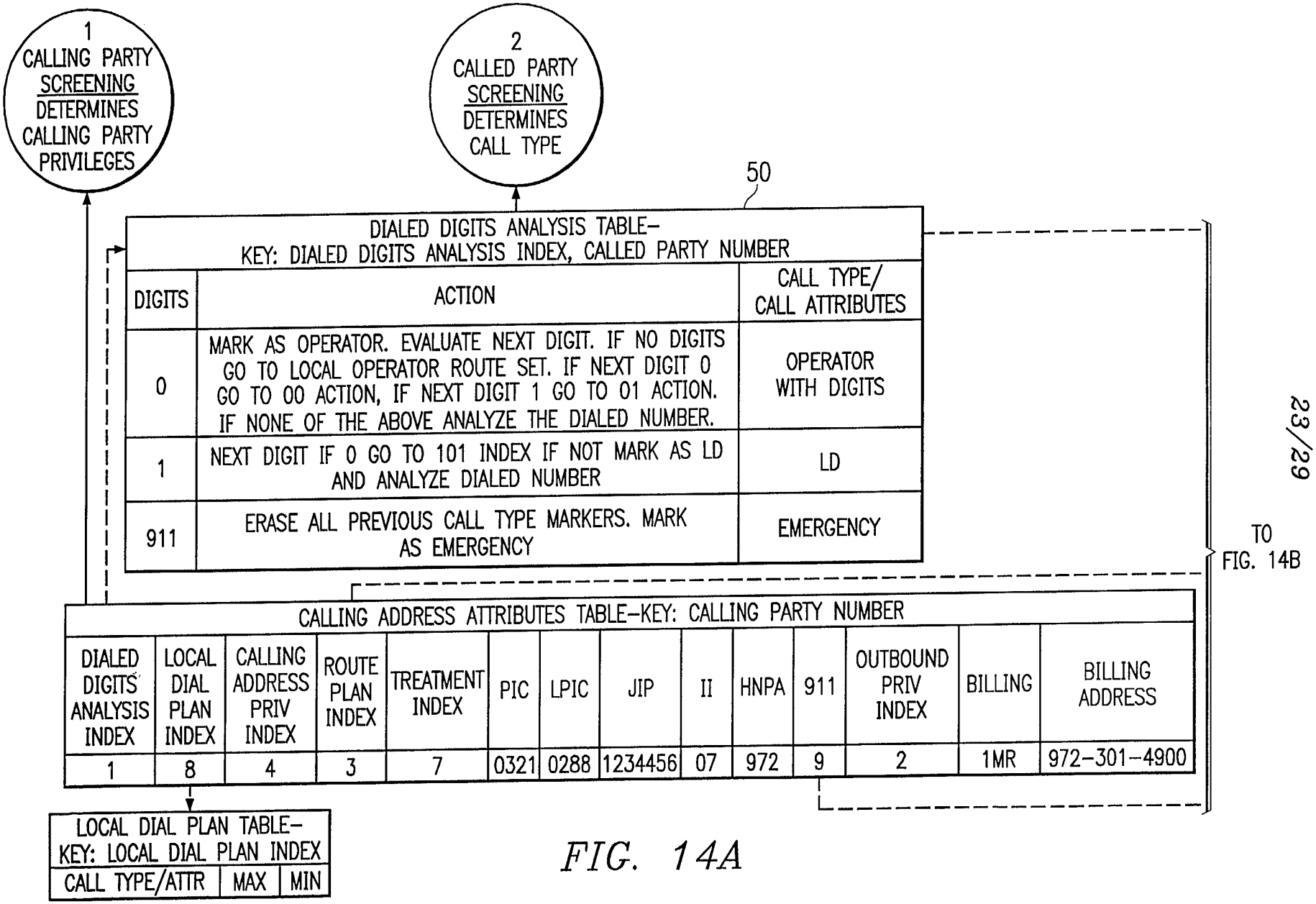

FIG. 14A

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T0070 "2057860

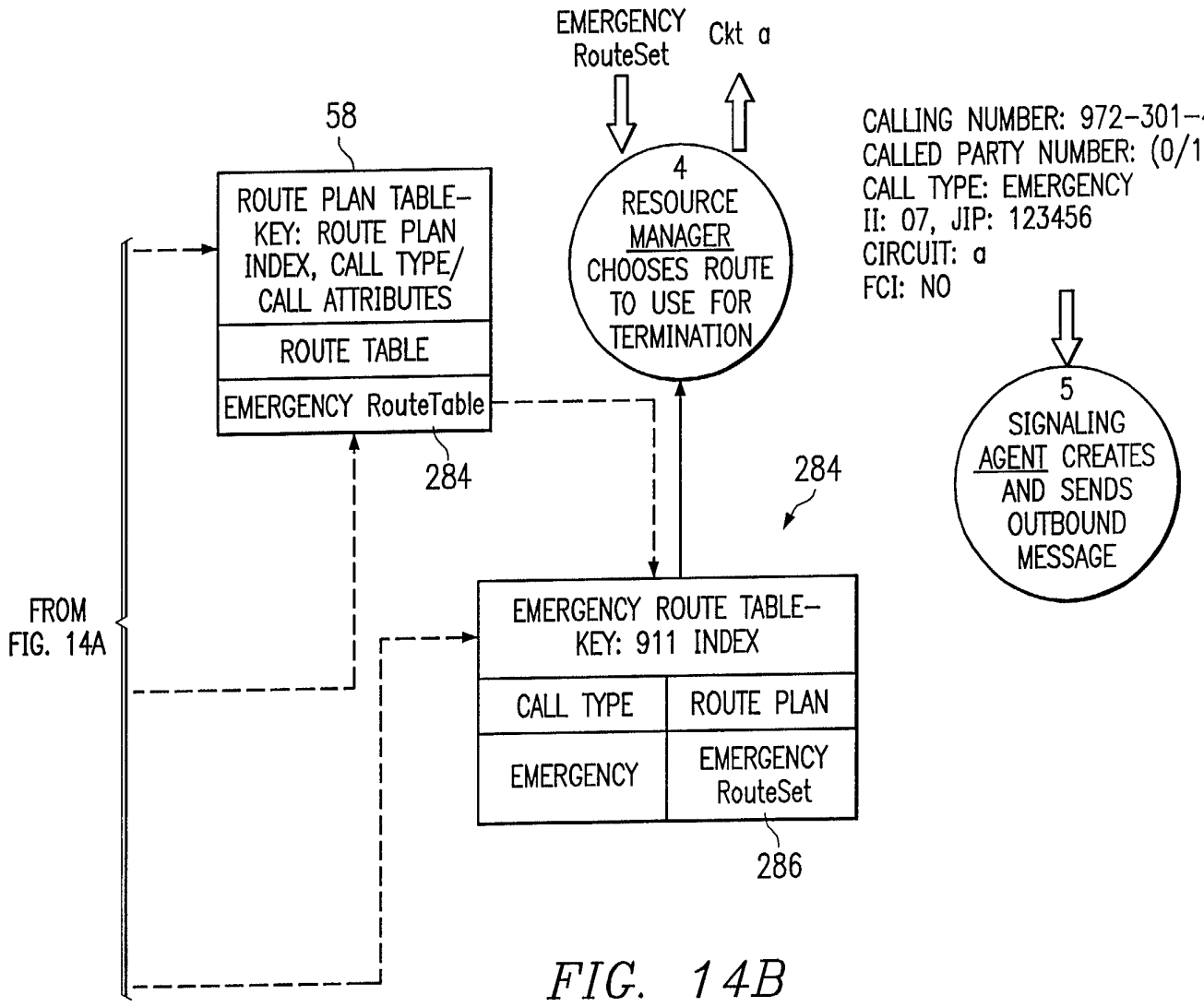

FIG. 14B

FOOT20"20ST2860

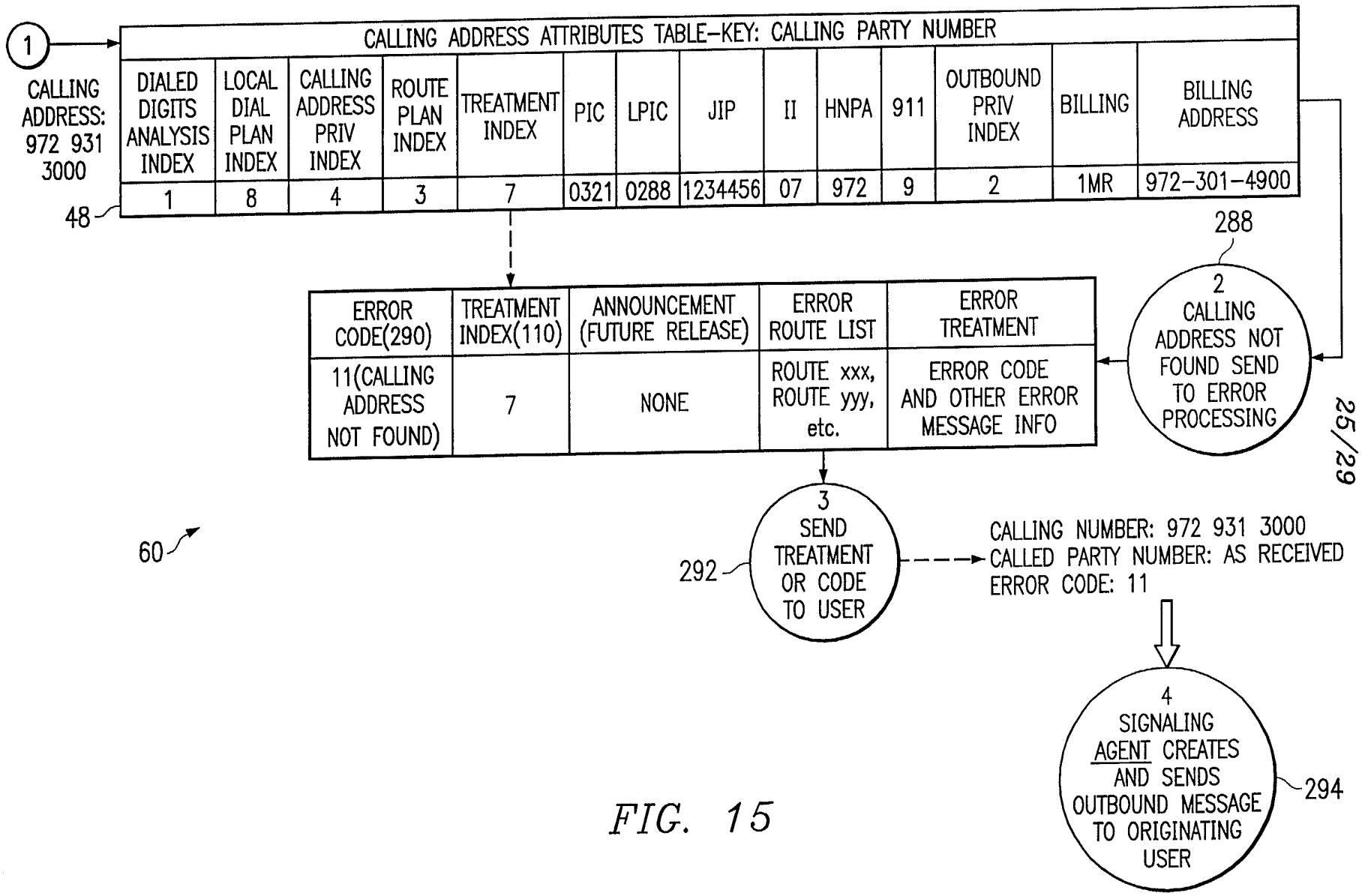

FIG. 15

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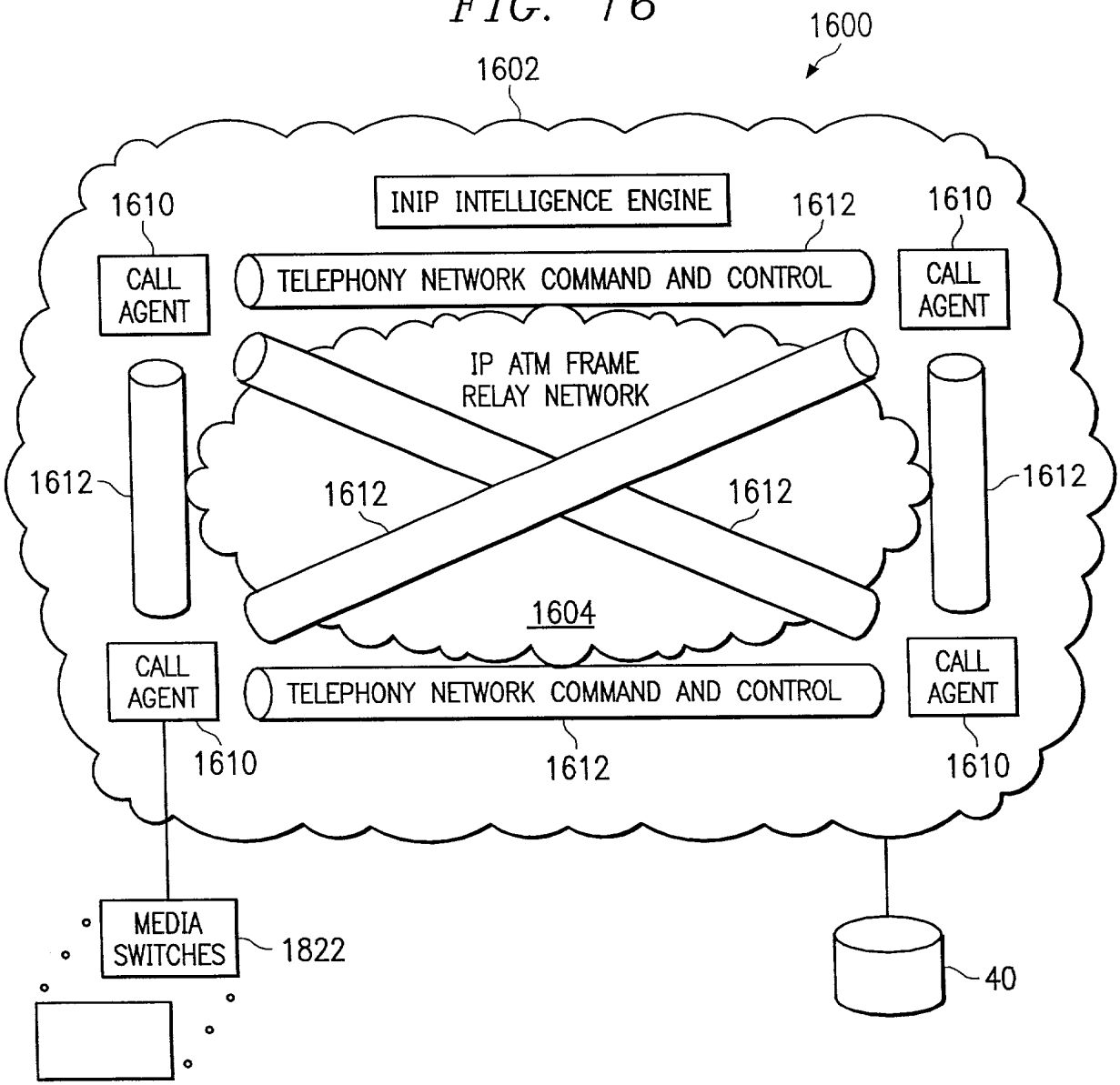
FIG. 16


1600
1602
INIP INTELLIGENCE ENGINE
1610
1612
1610
CALL AGENT
TELEPHONY NETWORK COMMAND AND CONTROL
CALL AGENT
IP ATM FRAME RELAY NETWORK
1612
1612
1612
1612
1604
CALL AGENT
TELEPHONY NETWORK COMMAND AND CONTROL
CALL AGENT
1610
1612
1610
MEDIA SWITCHES
1822
40

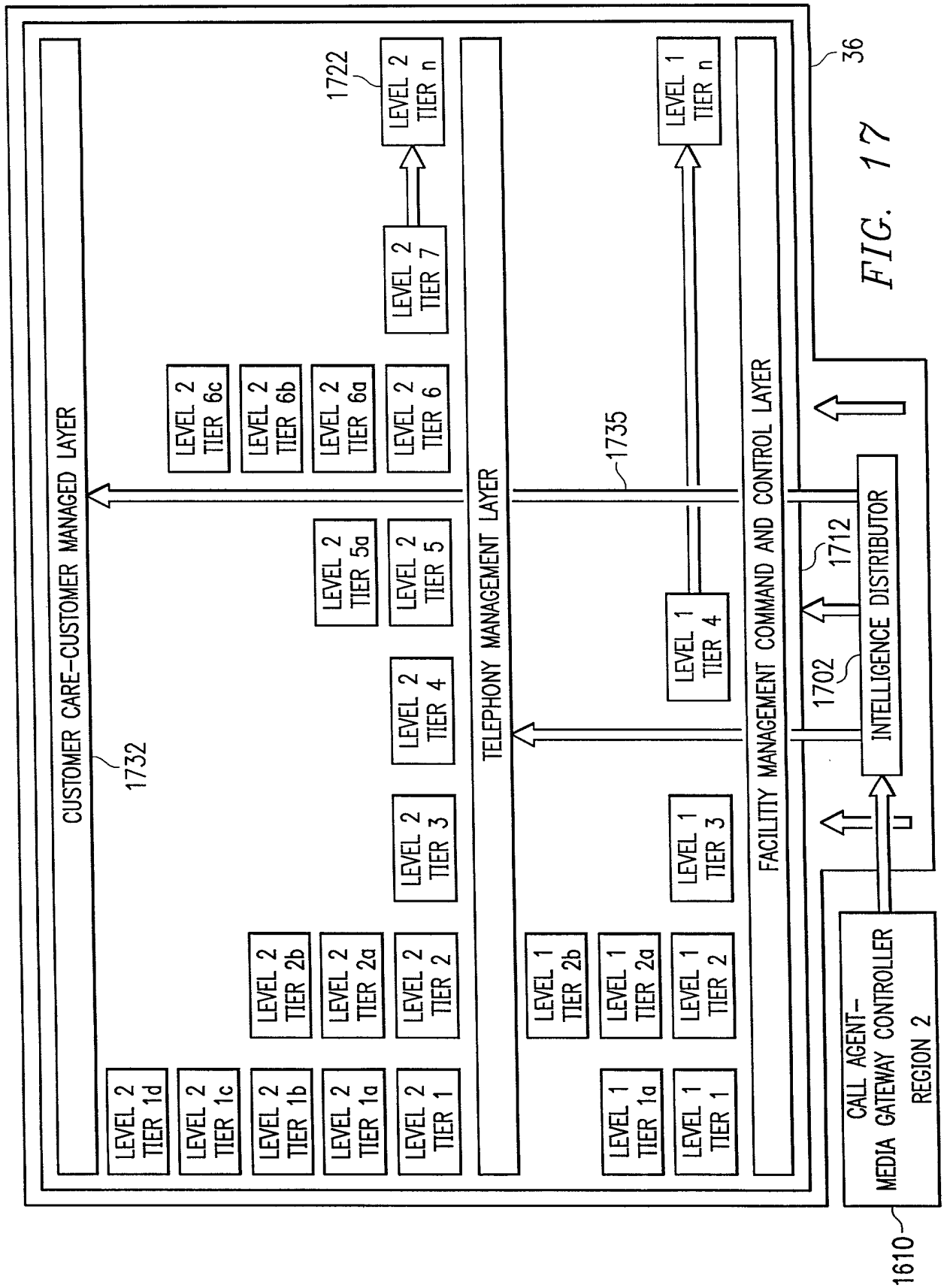

CUSTOMER CARE–CUSTOMER MANAGED LAYER
TELEPHONY MANAGEMENT LAYER
FACILITY MANAGEMENT COMMAND AND CONTROL LAYER
INTELLIGENCE DISTRIBUTOR
CALL AGENT–
MEDIA GATEWAY CONTROLLER
REGION 2
1610
1702
1712
1722
1732
1735
36
LEVEL 2 TIER 1d
LEVEL 2 TIER 1c
LEVEL 2 TIER 1b
LEVEL 2 TIER 1a
LEVEL 2 TIER 1
LEVEL 2 TIER 2b
LEVEL 2 TIER 2a
LEVEL 2 TIER 2
LEVEL 2 TIER 3
LEVEL 2 TIER 4
LEVEL 2 TIER 5a
LEVEL 2 TIER 5
LEVEL 2 TIER 6c
LEVEL 2 TIER 6b
LEVEL 2 TIER 6a
LEVEL 2 TIER 6
LEVEL 2 TIER 7
LEVEL 2 TIER n
LEVEL 1 TIER 1a
LEVEL 1 TIER 1
LEVEL 1 TIER 2b
LEVEL 1 TIER 2a
LEVEL 1 TIER 2
LEVEL 1 TIER 3
LEVEL 1 TIER 4
LEVEL 1 TIER n

FIG. 17

FIG. 18

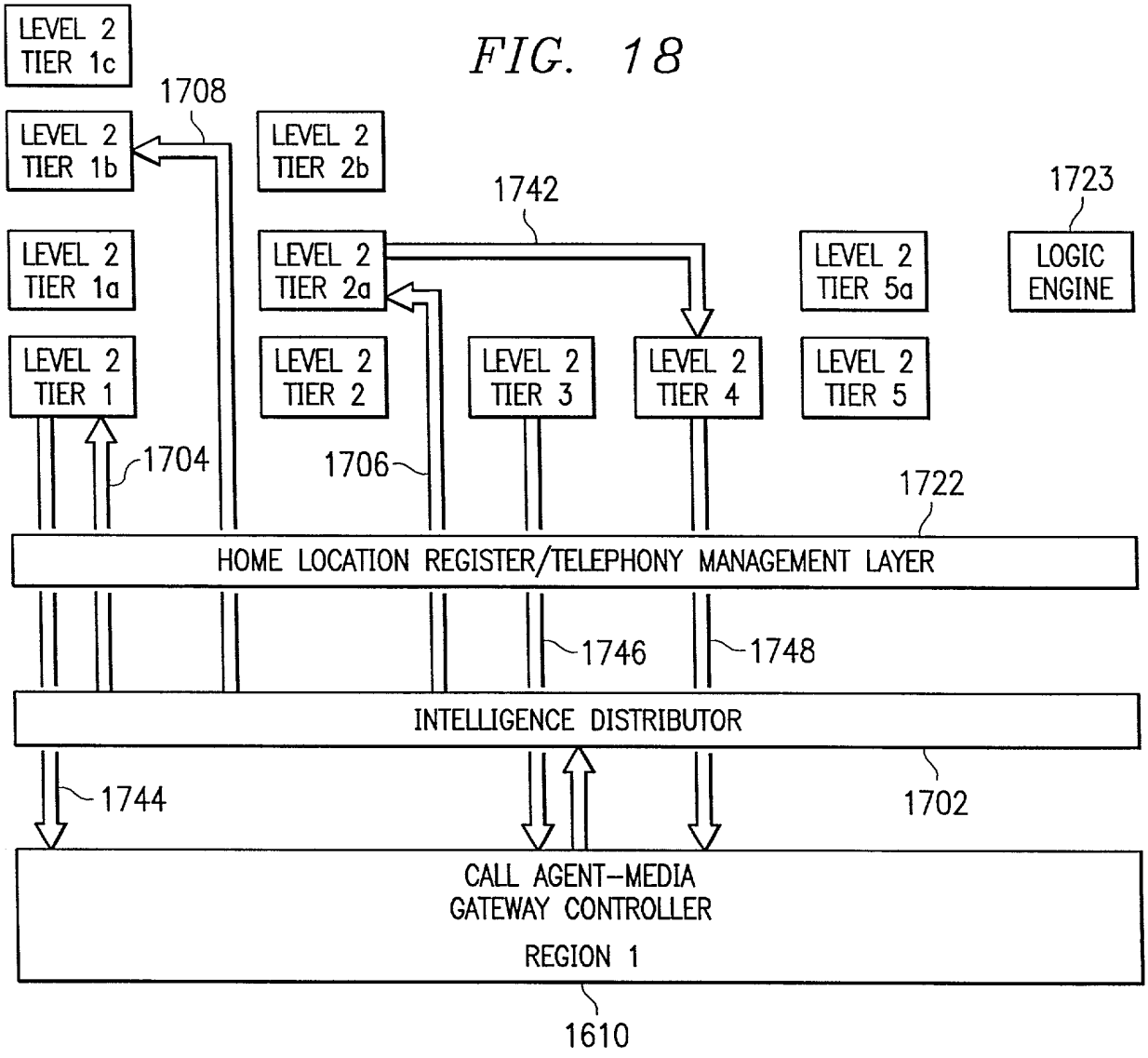
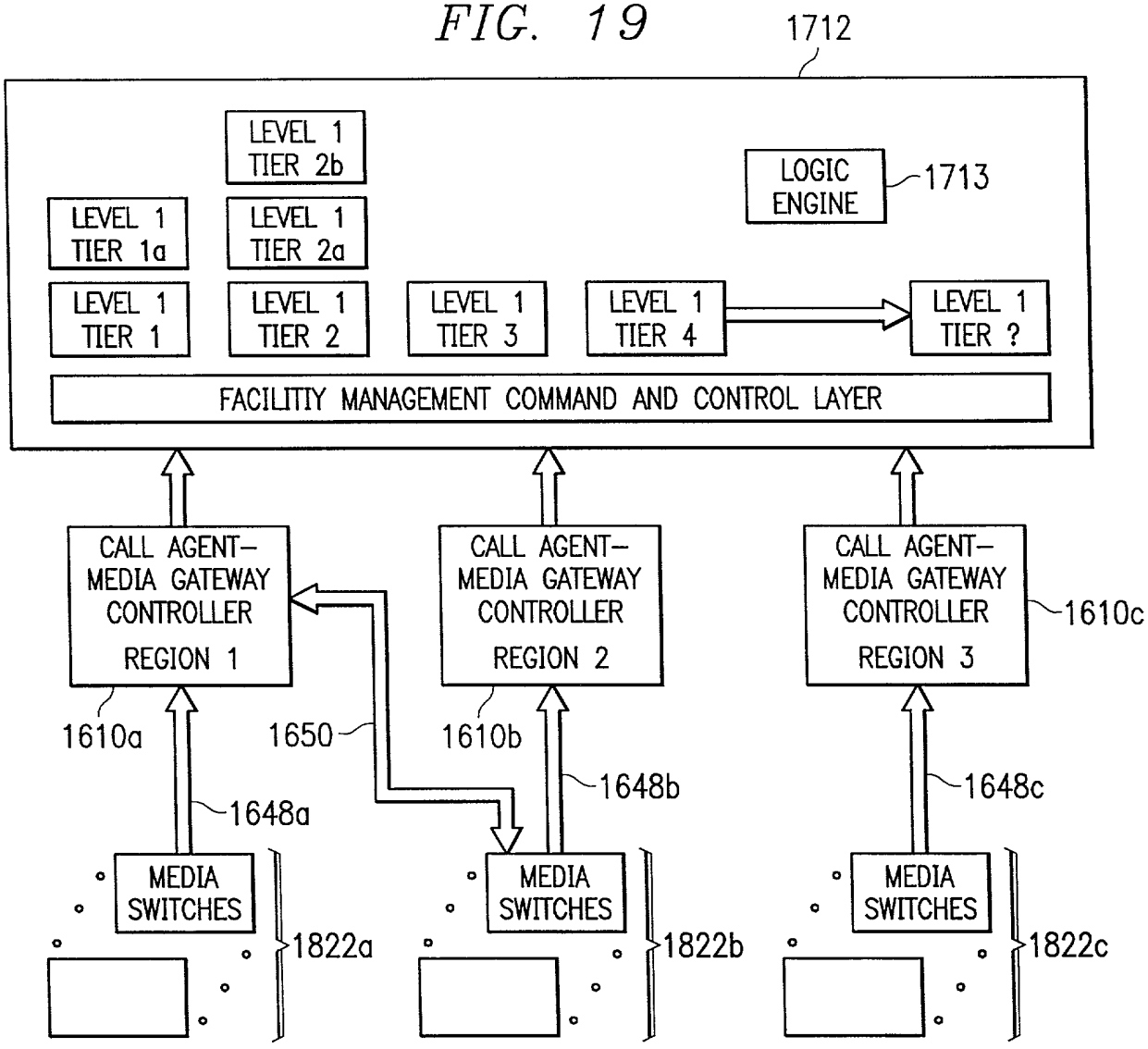

LEVEL 2 TIER 1c
1708
LEVEL 2 TIER 1b
LEVEL 2 TIER 2b
1742
1723
LEVEL 2 TIER 1a
LEVEL 2 TIER 2a
LEVEL 2 TIER 5a
LOGIC ENGINE
LEVEL 2 TIER 1
LEVEL 2 TIER 2
LEVEL 2 TIER 3
LEVEL 2 TIER 4
LEVEL 2 TIER 5
1704
1706
1722
HOME LOCATION REGISTER/TELEPHONY MANAGEMENT LAYER
1746
1748
INTELLIGENCE DISTRIBUTOR
1744
1702
CALL AGENT–MEDIA GATEWAY CONTROLLER
REGION 1
1610

FIG. 19


1712
LEVEL 1 TIER 2b
LOGIC ENGINE
1713
LEVEL 1 TIER 1a
LEVEL 1 TIER 2a
LEVEL 1 TIER 1
LEVEL 1 TIER 2
LEVEL 1 TIER 3
LEVEL 1 TIER 4
LEVEL 1 TIER ?
FACILITIY MANAGEMENT COMMAND AND CONTROL LAYER
CALL AGENT–MEDIA GATEWAY CONTROLLER REGION 1
CALL AGENT–MEDIA GATEWAY CONTROLLER REGION 2
CALL AGENT–MEDIA GATEWAY CONTROLLER REGION 3
1610c
1610a
1650
1610b
1648b
1648c
1648a
MEDIA SWITCHES
MEDIA SWITCHES
MEDIA SWITCHES
1822a
1822b
1822c